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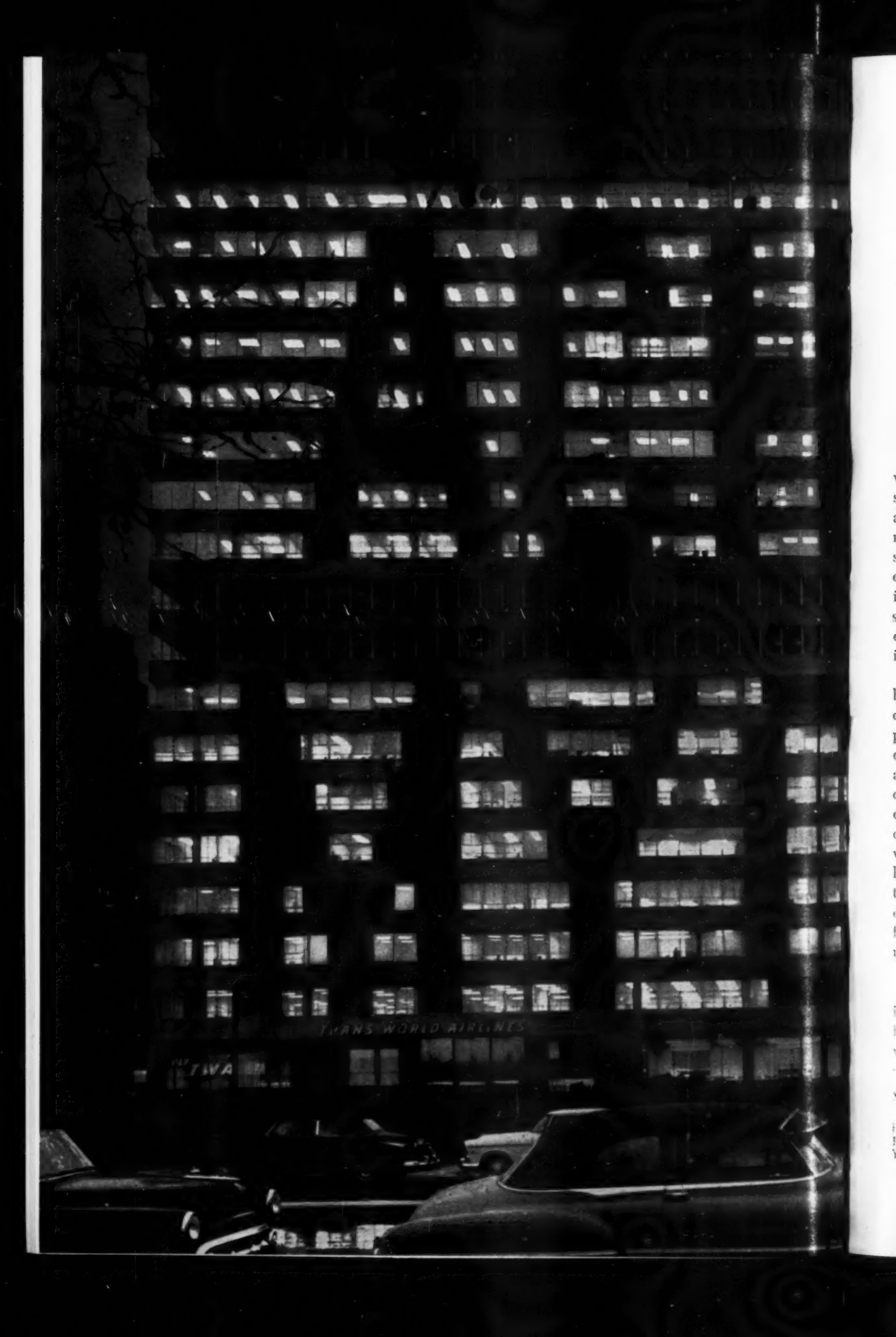
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VOLUME LII April, 1956 NUMBER 4

INTESTINAL OBSTRUCTION IN INFANCY

A PANEL DISCUSSION

Dr. Wright: The infant suffering from an intestinal obstruction presents his attending physician with an emergency which requires prompt diagnosis and skilled surgical attention if his life is to be saved. In a small number of cases expectant management may be followed by spontaneous dissolution of the obstructing mechanism. However, the usual penalty for delayed intervention is progressive deterioration of the infant as a surgical risk because of advancing dehydration, electrolyte imbalance, shock, or loss of viability of an obstructed portion of gut.

Nearly all types of infantile obstruction can be traced back to an anomalous development of the intestinal tract or its surrounding parietes. Exact pre-operative diagnosis of the obstructing mechanism is not always possible, and indeed it is frequently unnecessary in order to justify exproratory laparotomy. However, the surgeon who has the temerity to enter such an abdomen should be conversant with the many varieties of disturbed embryologic development which can foster obstruction. Of these many bizarre and fascinating entities, we shall have time to consider only a few. They may be grouped according to the usual age at which they declare themselves.

The Newborn Period

Imperforate anus, the commonest obstructing anomaly, is ordinarily apparent immediately at birth upon careful inspection. It occurs with a frequency of one case in about 2000 to 3000 births. This anomaly results from faulty coupling of the distal intestine, or hindgut, with the invaginating anal canal, or proctodeum, during the eighth to tenth week of embryonic life. Several varieties of anomaly may occur: (1) The hindgut may be completely lacking in any communication to the outside. (2) In the female it may empty by a fistulous tract into the vagina. (3) In the male it may have a fistulous communication into the bladder or urethra. (4) In either sex it may open through a fistula somewhere on the perineum other than the normal anal opening. In the first three instances the obstruction is not complete since meconium and gas may be able to ooze out of the urethra, vagina or perineal fistula. Such decompressing vents do not in general eliminate the necessity for early surgical intervention. Rarely the anus is properly located and canalized and the presence of obstruction is temporarily overlooked until the infant fails to pass meconium and becomes distended. Closer inspection of the rectum may then disclose a failure of the hindgut and proctodeum to merge high in the pelvis, or persistence of an anal membrane close to the orifice.

Only the persistent anal membrane is readily corrected. Cruciate incision of the transparent obstructing diaphragm and periodic dilatation of the anal canal permanently relieve the obstruction. In all other types of anal anomaly the surgeon is faced with two difficult decisions. First, he must decide whether to attempt immediate complete correction or whether to delay operative procedures until the child is older, meanwhile using a colostomy or pre-existing fistula as a temporary outlet.

Presented at the Meeting of the South Carolina Medical Association, May 12, 1955, Charleston, S. C.

This is an edited transcription of a panel discussion by Dr. Richard B. Josey, Columbia, (Moderator), Dr. Howell Wright, Chicago, Dr. Mark Ravitch, New York, and Dr. Merrill Sosman, Boston.

Secondly, if intervention is deemed necessary he must decide whether he dare confine his activities to reconstruction from below, or whether he must also enter the abdomen. In deciding the route of attack, valuable help may be obtained from the radiologist who can often give an exact statement of the position of the hindgut and its distance from the perineal floor. Delayed operation cannot be justified if there is a fistulous communication with the urinary tract since this makes the child vulnerable to chronic urinary infection. Such fistulas must be disconnected, preferably through an abdominal approach. Dr. Ravitch will no doubt comment upon the wisdom of delaying operation when a vaginal or perineal fistula is large enough to permit evacuation of the bowels.

Atresia of the esophagus, usually with tracheo-esophageal fistula, is not externally apparent at birth but produces symptoms within the first few hours. Even before the infant receives his first feeding an excessive amount of mucus is observed in the mouth and pharynx and auscultation of the chest may reveal moist rales scattered through the lung fields. When liquid is offered by mouth the mild sputtering is at once converted into an attack of strangling, coughing and cyanosis. These symptoms are of course due to the accumulation of secretions or feedings in a pharynx which cannot discharge them into the stomach through the esophagus but instead permits them to overflow into the larynx. In some instances the anomaly is such that the swallowing mechanism carries them directly into the trachea through an abnormal communication. Once the diagnosis of esophageal atresia is suspected, it is readily confirmed by exploration with a small, soft rubber catheter which will consistently fail to reach the stomach. Radiologic examination following the ingestion of a small amount of iodized oil demonstrates the type of location of the anomaly. Barium should not be used for this purpose since its accumulation in the lungs is undesirable.

The successful management of an infant with esophageal atresia and tracheo-esophageal fistula is a difficult technical feat. Few surgeons are able to accumulate a background of experience with the operation because the incidence (perhaps 1 in 4000 live births) is relatively low, and because a significant fraction of such infants are premature or have associated anomalies which make them poor surgical risks. Whenever possible attempts at repair should be undertaken by a surgeon who has had some previous experience with the problem.

Unlike the congenital obstructions which occur at the ends of the intestinal tract, anomalies of the mid-portion are varied in their anatomy and symptomatology and lend themselves to confusion with other infantile disorders. Some of these anomalies may remain asymptomatic until later infancy or even childhood. Although radiologic examination is not always able to yield an exact anatomic diagnosis it is essential in confirming the presence of an obstruction.

Atresia of the intestine invariably produces symptoms of obstruction within the first two days of life. At about the fifth week of fetal development the intestinal lumen is completely occluded by cords of proliferating epithelium. Normally the gut is recanalized by the tenth fetal week. Imperfect development may leave an internal diaphragm across the lumen or a solid cord connecting areas of normal intestine, or an area of complete discontinuity. Atresia is most common in the ileum; next most common in the third portion of the duodenum; and rare at other levels of the intestine.

Duodenal atresia produces early symptoms, usually on the first day of life, which consist of progressively more severe vomiting of bile-stained fluid with abdominal distention limited at first to the upper half of the abdomen. When the atresia is located in the ileum the symptoms may be slower in onset and the abdominal distention more generalized. The stools are usually small, infrequent, and lacking in squamous epithelial cells as demonstrated by Farber's test.

Stenosis of the intestine is due to the same embryologic fault of lesser degree resulting in a constriction but not a complete obliteration of the continuity of the lumen. Unlike atresia it is more common in the duodenum than the ileum and does not necessarily produce symp-

toms immediately after birth. Duodenal stenosis may lead to intermittent obstruction during early infancy. Ileal stenosis may go unrecognized until the constricted lumen becomes plugged with a fecal impaction.

Meconium ileus occurs in the immediate newborn period as the first symptom of cystic fibrosis of the pancreas or muco-viscidosis. Due to the abnormality of pancreas and intestinal glands, the meconium formed during fetal life is so thick and tenacious that it cannot be moved along the intestinal tract. It blocks the lumen by damming up at the ileo-cecal valve. Symptoms are indistinguishable from those of lower intestinal atresia, but the radiologic appearance of the abdomen may offer a suspicion of the correct diagnosis. The problem of surgical relief is, to say the least, a sticky one. If the infant's life can be saved by relieving the obstruction he will require prolonged dietary supervision of his underlying disease. Occasional normal newborns produce thick meconium which temporarily blocks the intestine and leads to a doughy distention of the abdomen. Rectal dilatation with the finger or a small enema usually suffices to initiate a forceful discharge of meconium. Such maneuvers should always be tried if meconium ileus is suspected.

Malrotation of the intestine is a complex anomaly which occurs with about the same frequency as atresia or stenosis. It results when the mid-gut loop of intestine which has been pushed into the base of the umbilical cord during the fifth week of fetal life makes a faulty entrance at the time of its return into the abdominal cavity around the tenth fetal week. If the cecum fails to reach its normal position in the right lower quadrant and fuse there with the posterior abdominal wall two potentially dangerous conditions may result. The cecum may be free on a mesentery or it may be abnormally adherent to the duodenum by direct application, or from a mid-line position it may be attached by peritoneal bands which run across the surface of the duodenum. Partial or complete obstruction of the duodenum may result from the pressure of the cecum or bands attached to it. At the same time, the root of the mesentery of the small intestine is formed upon an abnormally short base which may permit twisting of the whole small intestinal loop into a volvulus. If unrelieved, mesenteric thrombosis or gangrene of the bowel may create an irreversible situation.

The symptoms of malrotation are similar to those of duodenal stenosis or atresia. They may begin immediately after birth, late in the neonatal period, or may be delayed until later infancy. If the correct diagnosis is suspected, x-ray visualization of the cecum may afford the surgeon some warning of the confusing anatomic situation which he will find when he opens the abdomen.

Annular pancreas is an uncommon anomaly in which the pancreas encircles the duodenum and produces partial obstruction. Symptoms appear in the newborn period.

During the newborn period a few conditions may be confused with intestinal obstruction. Careful examination and observation is usually sufficient to make a differentiation and proper radiologic study is nearly always conclusive. Many babies will vomit after birth because of excessive mucus production. Such infants seldom vomit bile and their symptoms usually yield to gastric lavage. Vomiting from intracranial damage or incipient hydrocephalus is likewise non-bilious and can be distinguished by the associated clinical manifestations. Abdominal distention due to megacolon, tumor or anomaly of the urinary tract is not likely to offer confusion and can easily be differentiated by radiologic studies. The infant who has not been under continuous observation since birth may offer a difficult problem when vomiting, abdominal distention, dehydration and fever are present as manifestations of a severe infection such as sepsis, meningitis or pneumonia.

Later Infancy

In addition to the conditions already mentioned as able to produce intestinal obstruction after the neonatal period, there are a number of other anomalies which may occasionally be implicated. These include internal herniations, obstruction from adhesive bands or persistent omphalomesenteric duct, and compression of the intestine by duplications of the bowel or

by omental or mesenteric cysts. None of these conditions is frequent enough to warrant extended discussion.

During the second and third months of life, hypertrophic pyloric stenosis may appear and produce partial intestinal obstruction. It is well enough to be excluded from consideration here. In like fashion the diagnosis and management of incarcerated inguinal hernia is too obvious to require more than passing mention.

The most important form of obstruction during later infancy is intussusception because of its incidence and the frequency with which the diagnosis is overlooked and the great importance of prompt intervention. From about 3 to 4 months of age on through the first two or three years of life there is a significant incidence of this disorder. It occurs in well nourished, previously healthy infants and is usually not dependent upon the presence of inciting abnormality of the intestine. In all but a small number of cases the initial point of invagination is at the ileo-cecal valve. The early symptoms are subtle rather than dramatic. The mother usually notices periodic fretfulness, unexplained whimpering or transient pallor with periods of normal behavior between. Neither vomiting nor abnormal stools are early symptoms of the disorder. The periodic fussiness or silent blanching is much the most important early clue. Once the bowel is firmly engaged there will be no further passage of gas although one or more normal appearing stools may be discharged. The characteristic bloody mucus is not likely to make its appearance until the intussusception has been engaged for several hours. If the diagnosis is not made early, deterioration of the patient's condition and of the viability of the bowel may be signalized by fever, vomiting or progressive lethargy.

Physical examination of the child may be difficult because of the recurrence of abdominal discomfort. Characteristically the abdomen is relaxed, non-tender and easy to palpate so long as the child is quiet. The progression of the head of the intussusception follows the course of the colon. Palpation of the right lower quadrant often yields an empty sensation due to the fact that the cecum has departed from its accustomed site. A sausage-shaped mass is usually identifiable in the upper abdomen somewhere between the hepatic and splenic flexures of the colon. Digital examination of the rectum should be made in search of the characteristic currant jelly stool or direct palpation of a far-advanced intussusception.

Barium enema should be carried out as an emergency procedure whenever intussusception is suspected. If an inexperienced radiologist is making the examination it is wise to insist that films be taken if the examination is considered inadequate because of the presence of fecal masses in the colon. More often than not such fecal masses turn out to be the head of an intussusception which would not be identified at fluoroscopy. I am sure that the other panel members will have more to say about this procedure. Dr. Ravitch incidentally is a surgeon who champions nonsurgical management of this disorder.

Pre-operative Preparation and Post-operative Management

In the newborn period vitamin K should be administered routinely to counteract the normally low prothrombin level of the infant. Preoperative fluid administration is not essential when the diagnosis has been made early. However, most surgeons prefer a continuous intravenous infusion to be started before operation since it is likely to be necessary post-operatively and provides a quick method of administering blood or plasma if the need arises during the operation. The danger of overdosing the small infant by the intravenous route must be continually kept in mind. Even when there has been significant fluid loss before operation it is probably unwise to exceed a daily intravenous intake of 75 ml. per pound of body weight. Appropriate hourly rates should be calculated and maintained. If much blood or plasma is used, somewhat lower maximum doses are desirable.

Pre-operative lavage and decompression of the stomach is desirable to forestall aspiration. In many cases continuous gastric suction will be required after operation as well.

To minimize the danger of infection, administration of penicillin and streptomycin or

of a broad spectrum antibiotic is usually desirable for a few days after operation.

Post-operative feeding must be regulated according to the nature of the operative procedure undertaken and the viability of the bowel. Periods of starvation will seldom extend beyond a few days. Unless previously debilitated, the infant can readily tolerate a week of starvation if his fluid and electrolyte balances are maintained and are supplemented with plasma periodically.

Dr. Sosman: Dr. Wright very kindly sent me a copy of his paper in advance of this meeting and I had the opportunity to go over it. I have selected some slides to amplify or exemplify some of the points he has made which are quite important. An explanation of the importance of intestinal obstruction in children I think is very nicely defined by Dr. John Caffey the pediatrician at the Babies' Hospital for the Columbia Medical Center and radiologist, a very good combination to advance science and to disseminate learning. For all practical purposes he is a full-time man in pediatrics doing radiology. In his magnificant book which I can recommend as a good book for pediatricians as well as general practitioners, radiologists and surgeons he makes the following statement: "There is no area of pediatric responsibility where the patient benefits more from early accurate diagnosis, or where he suffers more from late or inaccurate diagnosis, as in congenital obstruction of the small intestine." I think that covers the urgency of the situation. Now the radiologist is, or may be, quite an important man in the team trying to recognize and correct the intestinal obstruction. At times the radiologist is the most vital man; he may demonstrate immediately where the obstruction is and have a good idea as to what causes it. In other cases he may be of no help at all. In some cases his x-ray examination may be entirely negative and the pediatrician and surgeon will have to go on the clinical signs. As a rule if the obstruction is complete the x-ray is almost always quite definite, the findings are pathognomic. Barium is not necessary in a case like that. If obstruction is incomplete, as it is in many cases, it may exhaust all of the radiologist's resources trying to decide if there is any obstruction and if there is, where is it, and of what type will it probably be. There a man of considerable experience is required, as Dr. Wright indicated, to do the right kind of examination, to know what to look for, and how to do it. In our experience in Boston, the causes of intestinal obstruction agree quite well with those of Dr. Wright. The great majority are of congenital origin, particularly in the stage of infancy. Regional ileitis or cicatrizing enteritis, whichever you want to call it, is definitely on the increase. Granulomatous enteritis might be a better name for it; whereas ileo-cecal tuberculosis, which used to be a very important cause in young children, has almost disappeared. We have not seen one for a long time. The problem of surgery versus the barium enema in the reduction of intussusception I am sure is going to cause a great deal of excitement in a few minutes. I shall leave the introduction of the subject, as well as the enema with Dr. Wright. Now may I show you the slides and exemplify some of the points which Dr. Wright has already mentioned.

This first case is one of atresia of the esophagus where the atretic segment ends abruptly at this point with a great deal of dilatation. About 30% of those are complete with no by-pass. The majority, about 70%, have a fistula into the trachea. Not infrequently there is a second fistula going from the trachea back into the lower segment of the esophagus, which may allow air to get into the intestine so that the sign of complete absence of air in the intestinal tract, the sign of complete atresia, may not be present.

The next slide is an example of obstruction lower in the esophagus from a bit of misplaced gastric mucosa. This is about the only time we see peptic ulcers in children, particularly in very young children. This child had a gastric ulcer in a bit of gastric mucosa in the lower esophagus and intermittent obstruction due to the spasm from the ulcer.

The next slide demonstrates classical pyloric obstruction, the major symptoms of which occur, as a rule, in the third or fourth week. It is rather interesting that they do not come on sooner. I would like to ask Dr. Wright or Dr.

Ravitch to give us a word on that when Dr. Ravitch's turn comes up. This condition is quite difficult to differentiate at times from a duodenal obstruction, that is the point of obstruction may be hard to demonstrate. A duodenal atresia may have all of the air in the stomach, such as the next slide, a congenital duodenal atresia all the air there is in the stomach and we are unable to decide whether the obstruction is at the pylorus or beyond the pylorus in the duodenal loop. It is not really important because the proper treatment is immediate surgery and we know about where the obstruction is, either at the pylorus or just beyond it. We have seen several cases of annular pancreas which causes a similar appearance to this, but on barium administration a small amount will usually get in and outline the obstructing band itself.

The next case is one of malrotation with the volvulus which Dr. Wright mentioned. We see here the pyloric canal and duodenum and the rotation is very beautifully demonstrated by those spiral loops of the small bowel, showing how it is twisted around the root of the mesentery as it rotated.

The next slide shows one of the common causes in our experience of intestinal obstruction, not complete obstruction, but intestinal symptoms due to partial obstruction. These are congenital duplications of the intestinal tract. It is a very common condition and, like anything else in medicine, the more we look for it, the more we see it. We have had several hundred cases demonstrated and identified at the Children's Hospital in Boston and this diagram demonstrates, in descending order, eighteen different areas where duplication of the gastrointestinal tract has been found. In many cases these will exist throughout life and cause no symptoms. In other cases the cyst may keep on filling with fluid, may become infected and have a sudden expansion and obstruction or hemorrhage, or it may just be in a spot where it causes obstruction without either hemorrhage or infection. It is frequently a cause of intussusception if it projects into the gastric lumen. It is one of those things again which must be considered and thought about in trying to make a differential diagnosis.

A rare condition in the duplication of the intestinal tract is calcification in the duplicated segment not connected with the gastrointestinal lumen. A few do connect with the normal lumen, in which case they may be identified by barium entering the abnormal loop.

The next slide is a calcified mass in the left upper quadrant of unknown etiology, it is certainly not part of the kidney which can be seen outlined very nicely with a normal pyelogram.

The next slide shows the same patient with intussusception. Now we can see the ladder-like striations of the musosa, the classical appearance of the small bowel mucosa in intussusception around this calcified duplication or cyst.

The next one is intussusception due to a large polyp arising in the ileum which is in the transverse colon beyond the hepatic flexure almost to the splenic flexure. This is not very common in infants, but is probably the most common cause of intussusception in the adult.

This next case is one of imperforate anus in a patient whose colon had ruptured and produced a pneumo-peritoneum, a most unusual sequence of events presenting this remarkable picture. We can see the fluid level here. We always take an upside-down film when looking for imperforate anus, with the thimble or some metal object being put where the anal dimple is seen.

The next case in again an upside-down film of a patient who had no movement at all through the rectum, with a very small questionably imperforate rectum, a patient with meconium ileus. Some of these at x-ray examination will have this characteristic appearance of fine granular sand-like shadows throughout the abdomen which apparently is the meconium itself opaque enough to show up in the x-ray film.

Here is another patient with obstruction of the bowel well demonstrated, but none of it down in the colon, this is all small bowel. Again we see this telltale finely-mottled calcification throughout the peritoneum indicating meconium ileas.

The final slide I shall show is a very good example of one of the things we have learned in the last few years, advancing knowledge a little bit further, and that is the cause of Hirschsprung's disease. Heretofore, everybody had been considering the dilated segment of the colon as the abnormal part of the bowel. Dr. Neuhauser, my colleague who combines pediatrics and radiology at Harvard, had the concept, and he demonstrated it, that the abnormal segment was the contracted area just inside the rectum. If we look for it and if we are careful when giving the enema and didn't cover it up by giving too much, we can find the small contracted segment in nearly all the cases of Hirschsprung's disease. That I think has changed our whole concept of the disease. We have gone on from there. The pathologists have demonstrated that there is a lack of normal ganglion cells in this contracted segment and some patients have a lack of ganglion cells throughout the entire colon. Thus we have a new disease, this one is "aganglionosis of the colon."

I have showed you only a few of the many diverse types of intestinal obstruction which we may meet in childhood and which we of course turn over as promptly as we can to the surgeon. In one of the recent journals of pediatrics this year, a survey of the intussusception problem was made, contrasting medical and surgical therapy giving the mortality by each method and strangely enough in some 12 to 15 different institutions the mortality ranges from 0 to 18%. It is not all on one side. It could be 0 by surgery, 0 by medical reduction. It may be 18% by medical or surgical reduction. To me it seems that the important thing in recognizing the intestinal obstruction in children and curing it with very little mortality depends first upon the alert pediatrician picking up the symptoms and going after it early. It also depends upon good radiology, a radiologist who knows what to look for and how to look, then a very good surgeon who knows what to do, and finally the whole team keeping the child in good electrolyte balance until he gets over his surgery.

Dr. Mark Ravitch: I'm sure you all realize how enviable it would be and how simple the position of the surgeon who was called upon to treat a sick child whose problem had been diagnosed and handled by Doctors Wright and Sosman. The position of the panelist who has to follow Dr. Wright and Dr. Sosman is not nearly so enviable. Almost everything I wish to say has been discussed by Dr. Wright and amplified and illustrated by Dr. Sosman. They have waved a couple of red flags for my benefit, which will help.

We do have a couple of lantern slides which we will show. There are really only one or two important messages involved in the diagnosis and treatment of neonatal intestinal obstruction. They have already been mentioned. Dr. Wright has said that newborn babies don't vomit, and if they vomit be suspicious, if they vomit bile your suspicions are confirmed. If a newborn baby vomits at all, if he regurgitates more than you think is right, certainly if he spits up bile, you should proceed at once on the definite assumption that that baby has organic intestinal obstruction and the next step is an x-ray examination. I don't know about most of you, but I was taught in medical school that you examined a patient and you percussed him and you thought, then you went back to your books and finally when all other resources had been exhausted, you asked for an x-ray examination. It was really thought a disgrace if you couldn't make the diagnosis without the x-ray. There is a certain reluctance today to get roentgenograms on newborn babies, yet I know nothing as rewarding as a roentgenogram of a baby and for the cost of a single film you can examine his head, extremities, thorax, abdomen and pelvis and obtain a tremendous amount of information from it. At the slightest suspicion in a baby that vomits, one should obtain films.

This first slide is of a baby who has an omphalocele. I bring that into discussion not only because that is an inconvenient lesion for the patient, but because it is occasionally associated with an atresia of the contained intestine and even in a case like this in which practically all the abdominal viscera are outside the coelom, perhaps you can just see the dark tip of

the spleen here, and all the intestinal tract; with very prompt treatment the situation can be dealt with by the method of Dr. Gross for such a lesion as this. That is, leaving the sac, lifting back the skin way around to the back, up on the chest, down on the pelvis, and pulling the skin up over the sac dealing with the resultant hernia at some other time. This is perhaps as good a time as any to bring up the importance in any type of intestinal obstruction in infants and children of passing a tube at once and starting continuous suction while you are going through all your diagnostic maneuvers. At the moment the baby is born, all the intestine is collapsed, but with the first few breaths the baby starts crying, air seeps down into the intestine, and any subsequent operative procedure for atresia or stenosis or for a condition such as is shown here becomes much more difficult so that we start gastric suction instantly.

This next slide is of a baby with a diaphragmatic hernia and his chest is filled with intestine. The important thing about this is that it actually represents intestinal obstruction which is possibly the most dangerous consequence of diaphragmatic hernia in the newborn. Obviously the enormous distention of the intestines displaces the heart far to the right and in this case across the mediastinum, compresses the lung entirely and the symptoms may present as symptoms of respiratory obstruction or collapse, but actually it is intestinal obstruction which is the prime mover in this sequence and this like omphalocele is one of the true absolute emergencies of the neonatal period. When one sees a diaphragmatic hernia one operates, though it may be at eleven o'clock on Christmas eve or New Year's eve. By morning that child may have become obstructed and may be in dreadful condition and one has added to the risk of the hernia repair the risks of operation for intestinal obstruction. While some children may go through life without symptoms in rare instances, that is no justification for delaying operation at all. Again, the first thing is a stomach tube to keep additional air from going into the intestinal tract. This is the postoperative picture. (Slide)

Now a view of some of the lesions which have already been discussed. This is a child, (Slide) who as you see has no air in the intestines at all, but notice how beautifully outlined by air the stomach and duodenum are. I am not sure really that aside from scientific curiosity and one's own clinical pride that it is quite as important as Dr. Sosman indicated to know exactly where the obstruction is. The fact of the matter is that one has principally to know just that it is obstruction. A transverse incision in a baby just below the umbilicus will give you very satisfactory access to anything between the diaphragm and the levator ani, and the important thing is not to delay operation. Whether the obstruction is complete or incomplete or whether it is high or low, is just a matter of clinical judgement, like describing exactly how acutely inflamed the appendix is. This is a child (Slide) who had an annular pancreas and it was relieved by a duoden-jejunostomy. You see air filling the intestine.

This slide is of a child with a meconium ileus and this is totally indistinguishable or largely indistinguishable from any other cause of neonatal intestinal obstruction. It is as you know, generally associated with cystic disease of the pancreas and the meconium ileus is simply one of the severe presumptive symptoms early in life. It is a difficult disease to treat, not only because the meconium which plugs the distal ileum is thoroughly glutinous and impossible to pull, to pick, to cut, or to push, but because even if by luck and skill is impossible either to remove all of this material or, as has been recently suggested by Dr. Gross and others, to resect the portion of the bowel which is plugged by it, even if you are able to do that you are faced with a child who has a very serious if not a hopeless metabolic disorder. A number of those children can now be carried through life actually because of the antibiotics which save them from the respiratory infections which otherwise carry them off.

Now here is a child (Slide) who has meconium peritonitis. That was a meconium

ileus, this is an entirely different lesion. This may be present as intestinal obstruction and, as Dr. Sosman said, you see a large area which is rather distinct and granular and within that area you see frank calcification. You can come to an unequivocal diagnosis before operation, on the basis of the calcification, of meconium peritonitis. That means that sometime during the antenatal period the intestines ruptured and the meconium leaked out into the peritoneal cavity, and strangely enough in most instances the perforation will be sealed off and will not be demonstrable at operation. However, in the vast majority of these patients there will be found an atresia, a stenosis, or rarely a meconium ileus to account for the obstruction which caused the bowel to blow out.

Now in this patient at operation there was a meconium ileus, this is some of the detritus within, the deeply purple stained material. This actually has detritus, you see, ingested by the giant cells, and this is quite unusual. There were in the inflammatory masses bits of mucosa which had come out of the intestine at the time and there was no perforation to be found at operation. A short circuit was made around a very acute angulation which may have been organic constriction, and this child did quite well.

Here we have a child (Slide) who has again a tremendous obstruction. This child was given barium when it was 21 days old. You see that there is an incomplete obstruction and this is a partial diaphragm at the duodenal-jejunal flexure. We, of course, agree with Dr. Sosman that in a large majority of cases you can tell almost as much from a simple x-ray examination that shows the distended stomach with some air getting through so that you know there is a partial obstruction, as you can from this barium meal which shows essentially the same thing.

This is a picture in which you will notice that we have reinforced with ink the outline of the bowel. This child had a situs inversus and in addition had a malrotated intestine with a mid-gut volvulus, which results of course from the fact that the entire small bowel hangs on the vascular pedicle of the superior mesenteric artery with no fixation of the mesentery, hangs as from a stalk and then in utero or outside the uterus rotates and produces a volvulus which produces a curious pattern of intestinal obstruction. In some hospitals, although you think that an atresia with an organic lesion that must be repaired by anastomosis would give you the highest mortality, in a good many hospitals, it is this lesion malrotation with volvulus, which gives you a higher mortality, and the reason is, in the first place that meconium is passed, and in the second place, that the babies vomit as if they had a very high obstruction, because of course the whole small bowel being twisted, the obstruction is pretty close to the ligament of Treitz and the bowel will be completely blocked off, distention never appears, and this sometimes presents a very puzzling picture. But if recognized early, the bowel derotated and measures taken to release any bands which may exist, crossing over from the mal-rotated colon across the duodenum, the patients do well. I would like to ask the other speakers why is it that once you derotate a volvulus, the child never gets a volvulus again. While we are on the question, I would like to know why it is, Dr. Sosman, that annular pancreas, which is of course a congenital lesion of the pancreas with the pancreas completely surrounding the duodenum, rarely is found to give trouble in infancy or childhood, but usually comes late in middle-life. Most of the cases of obstruction due to annular pancreas are in adults, not in infants at all.

I have been asked to say something about intussusception and a red flag was waved at me which was actually not the mention of discussion of the method of reducing intussusception, but the remarks about surgical and medical treatment. This is something which I feel very strongly about. What we are talking about is operative and nonoperative treatment. Surgery is the mechanical branch of the healing art. We don't operate on everybody who comes onto the surgical wards and yet we treat them surgically, we think. This is a roentgenogram of a barium enema of a child of nine months who had had symptoms of in-

tussusception, the classical kind described by Dr. Wright, of 27 hours duration. When the barium was given, you see the barium stuck right there, you see the concave head of the advancing intussusception, the barium outlining that, that much barium in the female vagina would outline the cervix, and it creeps up into these cornices which are elongated as we watch them under the fluoroscope and then suddenly the whole mass moves forward like this. Now sometimes there will be a delay of five, ten or even fifteen minutes at the start and then the thing suddenly begins to move. At times we have had to replace an intussusception which was hanging out of the anus so that we could get a catheter in the rectum. The intussusception may reduce almost too fast for you to stop it in order to get a spot film or two. At other times there will be a delay at the splenic flexure and another delay at the hepatic and quite commonly a delay at the ileo-cecal valve.

This slide shows the progressive steps in the reduction and finally complete reduction with many loops of small bowel filled. Our procedure with regard to intussusception is to call the operating room the minute the diagnosis is made. When a responsible pediatrician from the outside calls in that he is sending in an intussusception, you should call the operating room, call the anesthetist and have everything ready. If there is any doubt about the diagnosis we wait until we have seen the patient and as soon as the diagnosis is made we call the operating room and do the same thing. Then if the baby needs fluids or blood those are given at once. A tube is placed in the stomach, and the stomach emptied so the baby won't vomit and aspirate. In the fluoroscopic room the baby is put upon the fluoroscopic table, a large Foley bag catheter is inserted into the rectum, the catheter distended and the buttocks taped together strongly with adhesive tape. I'm sure that Dr. Wright and Dr. Josey remember that we used to use interns just to hold the buttocks together, but we found that while adhesive tape is a little more expensive, it is more efficient. This is not a very complicated method and yet the reason it is unpopular is twofold. First, there are few surgeons who can see quite as much glory in an enema as in a knife. The enema tube and bag may seem an undignified armamentarium for a surgeon, it certainly has no romance in it. In the second place, it frequently does not work. It does not work for annoyingly simple reasons—because the barium is so poorly mixed it won't flow, because the catheter has been greased and slips out, because the balloon has deflated and the catheter slips out. It is surprising how large a balloon can be expelled from the anus of a very small baby. If your balloon is firmly in place, it is frequently necessary to pull back on it a little so it pulls back firmly against the perineal diaphragm, and if the barium is allowed to run in by gravity from an ordinary infusion pole at a height of no more than 3 to 3½ feet above the fluoroscopic table and allowed to run in uninterruptedly, it has been our experience that you can reduce a very considerable majority of the intussusceptions by this means alone. Our over-all reduction percentage is now something like 74 or 75% and it keeps rising all the time. Of the last 21 intussusceptions done in Baltimore, and most of those done by the house staff, not necessarily by myself, 19 were reduced by barium enema alone.

This slide shows the story up to about 3 years ago. In New York we've had about 7 or 8 more intussusceptions with essentially the same proportion of reductions. You can see that complete reduction by barium enema alone was achieved with intussusceptions as far around as you like. We have had no instances of rupture, no instances of perforation, no instances of reduction of gangrenous bowel. We had one death in a child last summer. It was reported that the barium could achieve nothing and the child was operated upon and as one reconstructs it, it is fairly clear that the bowel which was reduced was gangrenous and left in place instead of being resected, but nothing in that case was achieved or lost by barium enema. I am in total agreement with Dr. Sosman that in clinics with expert pediatricians and good surgeons interested in the problem there will no longer be any difference

in the mortality from intussusception regardless of the method of treatment and no patient should die anymore of intussusception. That was not true when we first began to use this method, and I might say we began it about 50 years after its worth had been proven in Scandinavia and Australia, but at that time some of the largest institutions in the country, like a very large private clinic in Minnesota whose name I won't mention, could report a mortality of 34% without apologizing for it—this was for the treatment of intussusception. That was exactly the same mortality with which Hirschsprung astounded the world in 1900 so that people could not believe his figures and he was forced to issue a second report of 107 cases itemizing and describing the clinical course and the name and history of every single patient before they would believe his astoundingly low results because at that time mortality was almost 100% from the disease. However, today I think that no matter which procedure, as long as you do it well will be attended by any mortality except in irretrievable cases. But, the morbidity is inevitably going to be lower if in one group of patients 75% require no anesthesia,—and we have anesthetized none of these patients except a girl of about ten who bit me and I thought in her case anesthesia would be helpful. So in 75% of these patients where no anesthesia is required, no incision is required, you're going to avoid whatever incidence of complications and morbidity and prolongation of hospital stay may be associated with anesthesia and with incision in even the best hands.

It has been recognized for a long time that not all intussusceptions go on to the production of strangulation and gangrene and if you will study the mortality curves from any institution back in the days when there was an appreciable mortality from intussusception, you will find that in the cases treated let us say by operation alone in the first 12 hours, there was no mortality at all. From 12 to 24 hours mortality rose fairly sharply, and at 48 it got to be high. It leveled off somewhere between 72 and 96 hours and after 96 hours duration the mortality dropped acutely. That is not to suggest that if you see a child with intussusception of two days you should wait two more days before treating it. The point involved is that if a child has gone four days, if he had a strangulated obstruction the chances are he would have been dead, so that a good many of the children with strangulated obstruction have such acute and severe symptoms they come in early. We are quite convinced from our clinical experience, from the very extensive material in the recorded literature, and from our animal experiments that if you merely let the barium flow by gravity, don't allow anybody to manipulate the intestines with any heavy leaden gloves or without gloves, manipulate the bowel not at all, don't squeeze on the tubing, don't pump, don't surreptitiously raise the pole an extra couple of feet so that you won't perforate the bowel and so that you won't reduce gangrenous bowel. The strain on the intussusception from the pressure of the fluid is borne not by the gangrenous bowel which is intussuscepted, but by the upper end of the receiving loop of bowel the intussuscipiens which is the very last point that becomes gangrenous.

Question: In intussusception is there any way to prevent further recurrence?

Dr. Ravitch: This is a question in which I detect true southern courtesy. I think the question really means do you get more recurrences if you reduce them this way than if you operate. The answer is yes, you do. If you operate you will have an incidence of recurrence of perhaps 2%, if you treat them by barium enema you will have perhaps 4% to 6%. Now why is that? There is a corollary fact that all of you who have had experience with this problem will recognize. I think you have all seen children who were saved from an intussusception in infancy who returned at the age of five or six with intestinal obstruction due to adhesions and perhaps died at that time. The trauma of operative reduction is such that I think that it pretty well plasters the bowel up and decreases the likelihood of recurrence. I'm not sure that that is a justifiable reason for subjecting the patient to that trauma. I think too that it may explain the

fact that we almost never find that our patients need resection. One reason is that we don't see the bowel which probably looks pretty dark and pretty horrible and we are not frightened into removing perfectly viable bowel, and the second is that we have not traumatized the bowel the way you would have to if you manipulated it manually.

Question: Have you used an enema during operation as an aid to reduction?

Dr. Ravitch: Not quite. I began this work with a certain amount of opposition, from surgeons at least, when I was a junior assistant resident and could only do it when it was late at night and no one else wanted to get up to see the baby. When a classmate of mine, Bill Watson, now at Pittsburgh, was resident, he was extremely loath to let me use this occult method when we could instead see at operation what was going on. I finally said "I'll tell you what we'll do, take the baby up to the operating room, open it, look at the intussusception and then we'll watch it while we hang a bottle of intravenous saline up and let it run into the rectum through a catheter. He said all right, so we took the baby up to the operating room, the intussusception was in the descending colon, we trusted each other like more or less brothers. He put in two fingers and I put in two fingers, and we held the intussusception between them. He said "I'll give you five minutes by the clock." We let the fluid run and at the end of five minutes he looked at me rather pityingly, for neither of us had felt anything, we took out our fingers and found the intussusception totally reduced. The reduction was so gentle that it was absolutely imperceptible to us. I'll admit that we were handicapped because each of us had only one cortex going with which to feel this thing, but apparently it was just the most gentle thing in the world. We have done it many times in dogs, just watched the intussusception reduce, and it really is a very gentle, smooth progression.

Question: What clinically makes you suspect a hiatus hernia from birth?

Dr. Ravitch: I have only seen one, so I will pass that on to Dr. Wright or Dr. Sosman.

Dr. Wright: I haven't seen any.

Dr. Sosman: It is very uncommon—true hiatus hernia is usually a defect of the diaphragm.

Question: Is there any difference between eventration of the diaphragm and diaphragmatic hernia?

Dr. Ravitch: The first question, how do we recognize the diaphragmatic hernia in a baby? By a combination of symptoms of respiratory distress and intestinal distress. A baby who vomits and is blue, or breathes rapidly, a baby who is moderately cyanotic or breathing rapidly, who gets worse with every swallow he takes because of the air and fluid going up in the chest, where the stomach usually is in these patients. Rarely by physical signs, though I have seen awfully good interns who picked them up in a routine physical examination of a newborn baby, but this is not awfully common really, and many times we just suspect it and confirm it by x-ray.

Dr. Josey's question, what is the difference between eventration and a hernia. I have puzzled long and hard over that; I am sure that Dr. Sosman and Dr. Wright have the answer. For one thing, you just go through the Index Medicus and get out all the reports on eventration: the bulk of them are due to phrenic paralyses which occur due to tuberculosis or some other disease. Most people just take eventration to mean an elevated diaphragm and that's what frequently happens. If you seem to have an elevated diaphragm it is common to say it's not hernia but eventration. I think it has become an academic distinction. If you mean that an eventration of the diaphragm is a diaphragmatic hernia with a sac, we have certainly seen perforation and gangrene of the viscera in herniae that have a sac just as in herniae that don't have, although the majority of congenital diaphragmatic herniae do not have sacs. There is a group of patients in whom we've been interested—one sees a peculiar bulge continuous with the diaphragmatic shadow on the right. At operation that is found to be due to a thinning out of the diaphragm with a herniation of the liver through it, which has been there all the time, so it's neck is con-

stricted and in one of those babies with every move and respiration this bulge struck the heart. Some of these patients have compression of the lower lobe and have repeated bouts of pulmonary infection. It is extremely rare to find an entire diaphragm which is tissue-paper-thin and elevated, which is the picture often given of eventration and rarer still to find no diaphragm at all. You can generally assume, and this is important, that a surgeon can correct satisfactorily any diaphragmatic hernia that comes down the pike. He will fail once in a while, but there is usually enough tissue to complete the repair.

Dr. Sosman: I agree that a lot of the eventrations are in all probability paralyses. The differentiation that we have used has been the movability of the diaphragm, watching the patient work-up. If it's completely paralyzed you will get a paradoxical movement. The weakened diaphragm will move up and the normal diaphragm will move down. Eventration to me is a mixture of things. It is not one specific etiological thing, it is a group of things that has to do with marked elevation of the diaphragm, some paralyzed, some incompletely developed, and the great majority of them have no symptoms. That to me is the striking difference between eventration and hernia. Hernia will have symptoms that cause compression of the bowel, whereas in eventration the bowels are below the diaphragm and usually function quite normally.

THE RELIEF OF SYMPTOMS, by Walter Modell. W. B. Saunders Co., Philadelphia, 1955. Price $8.00.

In his preface the author, Associate Professor of Clinical Pharmacology at Cornell University Medical College, points out the fact that modern therapy concentrates so greatly on the efforts at curing disease that symptomatic treatment of the patient may often be neglected. For this reason he undertook to collect and edit lecture and seminar material for publication as a book devoted to the relief of symptoms.

The section on theory presents arguments for the use of medications for symptomatic relief, makes an effort to evaluate relief, to evaluate the patient's complaint, and to discuss, in general, considerations regarding the usage of drugs and what is to be expected of them.

Then follows chapter by chapter discussion of various symptoms and comments as to their treatment.

The final section is a short discussion of the dangers of the use of and indications for steroid therapy.

The book is simply written, contains much information of practical value and would be of some assistance to students and practitioners in consolidating thinking as to the value of available symptomatic remedies for the symptoms discussed. Nothing that is new or unknown is presented, but a good deal of useful advice in the choice of effective drugs is given.

—Kelly T. McKee, M. D.

CLINICAL DISORDERS OF HYDRATION AND ACID-BASE EQUILIBRIUM by Louis G. Welt, M. D.,—215 pages—Little, Brown and Co., Boston. Price $6.00.

The jacket blurb of this book is written by Homer W. Smith, dean of renal physiologists. He states "Every physician in every branch of medicine recognizes the importance of salt and water balance and is well aware that many advances have been made in recent years in the study of body fluids. . . .

Clinical Disorders of Hydration and Acid-Base Equilibrium is well written, concise, and represents the carefully considered judgments of one who had had extensive experience in this and related areas. It fills an important gap in medical literature, and I predict that, in order to attain immediate and widespread reception, you need only exhibit the table of contents."

Doctor Smith does not praise this book too highly. The author begins with the assumption that the reader is totally unprepared to read a book of this type without a review of fundamentals of the field. He thoroughly discusses definitions and concepts and goes on to review renal physiology and the multiple clinical problems involving water and electrolytes.

The book is of value as a primer of fluid balance or as an excellent review of a complex subject.

—Arthur V. Williams, M. D.

ELECTROCARDIOGRAM OF THE MONTH* – CARDIAC ANEURYSM

DALE GROOM, M. D.**
Charleston, S. C.

Case Record—A sixty-five year old negro male being followed in the out-patient clinic of the Medical College of South Carolina was seen in December 1955, at which time the electrocardiogram below was made because of a suspected arrhythmia. The patient acknowledged no symptoms suggestive of cardiac disability. He was known to have had diabetes mellitus for several years, and in 1948 his left leg had been amputated because of occlusive arterial disease with gangrene of the left foot. Again in August 1954 he had been hospitalized for treatment of a similar condition in the right lower extremity, stating that he had chopped off the toes of his right foot himself with an ax because of extensive gangrenous necrosis. A below-the-knee amputation was performed on this admission under refrigeration anesthesia, following which the patient was digitalized because of questionable congestive heart failure. An electrocardiogram taken at that time was interpreted as indicative of an old anterior wall myocardial infarction.

On several subsequent visits to the out-patient clinic (primarily for control of his diabetes) the patient's blood pressure was observed to be on the order of 170/90. The patient acknowledged no history suggestive of coronary occlusion at any time.

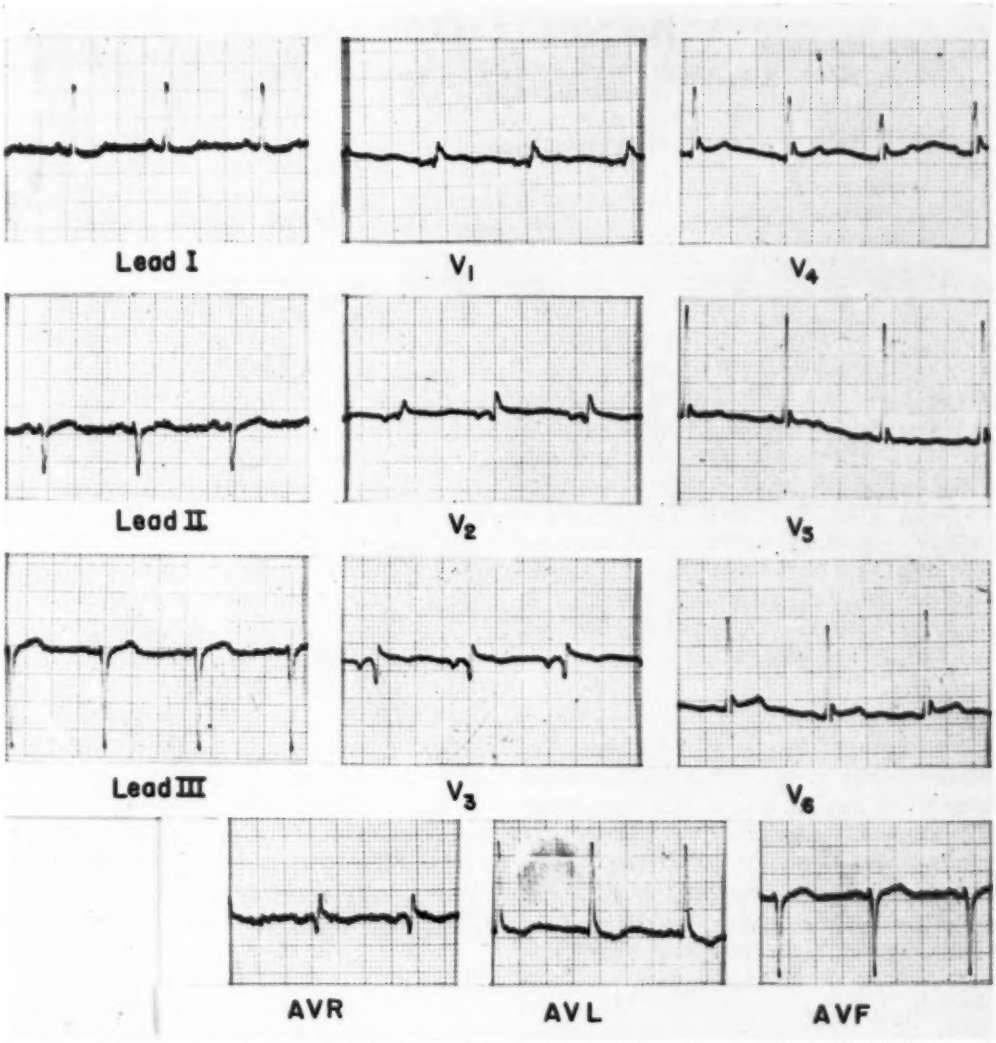
Electrocardiogram—The most significant features of this electrocardiogram are seen in the precordial leads V-1, 2 and 3, and consist of prominent Q waves followed by relatively small R waves, and elevation of the ST segments of about 1 mm. The electrical axis is horizontal, producing a so-called left axis deviation, but that this is not indicative of left ventricular hypertrophy is indicated by the normal intrinsic deflections of the R waves in the left ventricular leads. The QRS deflections in V-2 and V-3 are of conspicuously low voltage, and some T wave changes are present in these and other leads, compatible with the effect of digitalis.

Discussion—The Q waves which are both deep and wide in V-2 and V-3 are indicative of previous infarction of the anterior myocardial wall. The localized low voltage deflections of the QRS complexes in these leads is further corroborative evidence of this. Indeed, if only the routine four lead electrocardiogram of a dozen years ago had been used in this case the diagnosis would have been missed altogether, for there are no significant changes in the standard limb leads. Elevation of ST segments in the precordial leads suggests that the infarction might be a very recent one, but this was persistently present in subsequent tracings which showed none of the evolutionary changes ordinarily encountered in acute infarction.

These findings are strongly suggestive of a ventricular aneurysm. Accordingly, the patient was referred to the radiologist for cardiac fluoroscopy with a request that he look specifically for this abnormality. Roentgenographic studies were done on February 24, 1956 with the finding of a small aneurysm of the anterior wall of the right ventricle, observable only when the patient was viewed in the right anterior oblique position.

"Cardiac aneurysm" is an old term which at one time was used rather loosely to describe almost any sort of cardiac enlargement. Currently it is used to denote a *localized* dilatation, usually of a portion of the wall of one of the ventricles, almost always the result of previous infarction of that area. A more specific term for this might be ventricular aneurysm. This lesion should be suspected in any case which shows persistent elevation of the ST segments in precordial leads, especially if there is also evidence of previous infarction. These ST segment displacements, the exact cause of which is still uncertain, may persist for years; in other words, the normal evolutionary changes in the electrocardiogram following acute infarction become, as it were, arrested at an intermediate stage in ventricular aneurysm. When the lesion occurs on the posterior or diaphragmatic surface of the heart it is far more difficult to diagnose both by x-ray and by ECG, since the paradoxical pulsation of the aneurysmal area is more difficult for the roentgenologist to visualize in this region, and we have no electrocardiographic leads from the posterior wall comparable in localization to the precordial leads for the anterior wall.

Ventricular aneurysm is said to be much more frequent among patients with hyper-



tension and diabetics, and particularly among those who show definite electrocardiographic evidence of having had a previous myocardial infarction without the patient having known of it (the "silent infarcts"). In one series of 40 cases[1] half of them gave no history suggestive of coronary occlusion. It is of course understandable that lack of rest and treatment during the acute stage of infarction, as well as any elevation of pressure in the ventricle, would predispose to aneurysmal dilatation. Also understandable is the fact that chronic congestive heart failure is said to be a more frequent complication of infarction in the presence of ventricular aneurysm. With an outward bulging of one portion of the ventricular wall while the remainder contracts in systole some decrease in cardiac output and perhaps in blood pressure might be expected.

The relatively small cardiac aneurysm in this patient undoubtedly resulted from his extensive atherosclerosis involving both peripheral and coronary arteries.

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RESECTION IN PULMONARY BLASTOMYCOSIS

A REVIEW WITH PRESENTATION OF A CASE

EDMUND R. TAYLOR, M. D.
Columbia, S. C.

Optimism in the treatment of the once dread disease of systemic blastomycosis is now justified. Considerable progress in the treatment has been made and knowledge gained which has brought about a challenge to our long held concepts about the natural history, incidence, and prognosis of blastomycosis. It is held by some that this disease is naturally much less severe than previously thought. Recent chemotherapy has opened a new era, the role of surgery is being rapidly clarified, and the advances in both of these branches of medicine have markedly improved the outlook for those afflicted with this disease.

North American blastomycosis or Gilchrist's disease is caused by a specific organism, blastomyces dermatitidis. The classical view has been to divide the disease into two groups, cutaneous, and systemic or disseminated. The systemic form has lesions in the deeper organs. It has been thought that the cutaneous type was often a totally separate form. Recent evidence, however, suggests to some investigators that perhaps almost all the cutaneous forms are actually but a manifestation of systemic involvement from the primary lesion in the lung. Dissemination occurs chiefly through the hematogenous route, producing positive blood cultures, although the disease also spreads by direct extension and through the lymphatic vessels. A tendency to heal is often present in the lung as well as other organs.

Incidence

Blastomycosis in South Carolina occurs infrequently but has been reported from the coastal area to the mountains. Anne Adams[1] from the Medical College of South Carolina reports that a laboratory diagnosis was made there three times in the last 5 years. These patients were from Andrews, St. Matthews and Tigerville, and there was pulmonary involvement in all three cases. Smith[16] found that three cases from South Carolina have been seen at Duke University Hospital. They came from Hartsville, Bennettsville and Bishopville. Five of the above 6 cases were from east of Columbia in the sandy area of the state.

Blastomycosis is almost exclusively a North American disease. It occurs predominately east of the Rocky Mountains. Kunkel, *et al*[8] report 6 cases from the Rocky Mountains. Most of their 90 cases which were seen at the Mayo Clinic came from the upper Midwest. They feel that it is just as endemic in the upper Midwest as it is in North Carolina. North Carolina has been considered an endemic zone. Cases have been reported from about all of the southeastern states, the states of the Mississippi Valley, the Ohio River Valley, and from Buffalo.

In 1939 Martin and Smith[10] collected 243 proved and presumptive cases. Smith[14] in 1949 reported 50 cases studied at Duke Hospital in 18 years. Seabury[2] treated 12 cases of systemic blastomycosis at Charity Hospital in New Orleans over a two and a half year period. It has been a common experience that the incidence of the disease parallels to a large degree the index of suspicion manifested by the medical profession toward it in a particular locality.

The first proved epidemic of blastomycosis occurred in 1954 according to Smith, *et al.*[17] This consisted of 11 cases over a few months' period in one small locality in the eastern part of North Carolina.

Prognosis

In the past the prognosis in the systemic form has been considered dismal. The review of Martin and Smith[10] showing a mortality rate of over 90% has been expressive of the

general attitude of the profession toward it. Recent data shed doubt on the accuracy of this attitude and seem to contradict the belief that death is almost inevitable once the disease is no longer limited to the skin. Schwarz and Baum[12] emphasized the tendency of blastomycosis toward spontaneous healing, especially in the lung, but also in other organs, and they also contended that the disease is predominately a pulmonary infection notwithstanding its cutaneous or other systemic manifestations. At present we are in the midst of a controversy concerning the natural history of this disease, and the prognosis is one aspect under controversy.

Some significant studies on the prognosis in the systemic and pulmonary form of the disease have been undertaken. In the series of Martin and Smith[10] in which the cases were followed two years or more the mortality was 92%. However, Kunkel, *et al*[8] found in 36 cases of systemic disease a comparative mortality of only 23.3%. These 36 cases were from 90 cases seen at the Mayo Clinic. Weisel and Landis[20] have reported 7 cases of pulmonary disease, none treated by stilbamidine, and all apparently cured. In the 10 cases of resection of pulmonary blastomycosis, (later presented herein,) in which no other specific treatment was used only one died of blastomycosis. The above data suggest that the prognosis of the systemic disease is not as bad as has been commonly considered.

Kunkel, *et al*[8] presents evidence that subclinical pulmonary infections occur and disappear spontaneously. He reports the first case of subclinical pulmonary blastomycosis with spontaneous cure on record. Smith, *et al*[17] recently reported a similar spontaneous cure in a child from North Carolina with lung involvement. Kunkel, *et al* points out that perhaps blastomycosis might be similar to coccidiomycosis and histoplasmosis which have now been shown to exist not uncommonly in a subclinical form. Only a few years ago these diseases were considered almost invariably fatal even more often so than blastomycosis. However, it has now been shown that many patients with histoplasmosis and coccidiomycosis recover without complications.

Diagnosis

The preoperative diagnosis in the pulmonary form of blastomycosis is often difficult even when all available tests are employed. The clinical picture is not diagnostic. Roentgenologically, there is no characteristic picture. Bronchoscopy can be of considerable value. Weisel and Landis[20] reported 7 consecutive cases with endobronchial disease. Superficial mucosal erosions and glairy, thick brown mucous were characteristic findings. Rarely an endobronchial mass will be found. Secretions from the bronchi or tissue for biopsy should be taken and studied by stains and cultures. Sputum studies consisting of smear and culture are most important and are the ideal diagnostic methods. A positive skin test is considered significant and the complement fixation test may become positive in extensive forms of the disease. In the cases treated surgically and reported herein the preoperative diagnosis was made in only a few instances.

Roentgenographic Picture

Roentgen examination of the chest is most important in discovering a lesion, however it helps but little in making a specific diagnosis. However blastomycosis may be compared to tuberculosis except that it shows a greater incidence of fibrosis, massive consolidation, pleural involvement, and a smaller incidence of pleural effusion, cavity formation, mediastinal adenopathy, and miliary lesions. Large or small cavities can occur in blastomycosis and are not too infrequent.

Medical Treatment

The introduction of the aromatic diamidines has revolutionized the treatment of pulmonary blastomycosis. Patients seem to respond equally well to these drugs regardless of the presence or absence of skin hypersensitivity or the presence of complement-fixing antibodies in the blood. Two cases of blastomycosis were treated with intravenous injections of stilbamidine by Schoenbach and Associates[11] in 1951. In 1952 Snapper and McVay[18] treated 2 cases with 2-hydroxystilbamidine. Seabury[2] has treated 12 cases with these drugs and Smith[15] treated 22 cases. Smith[15] reports on 17 cases treated by stilbamidine and 5 by 2-hydroxystilbamidine. These were pulmonary or

systemic cases and did not include the cutaneous type. One patient was practically moribund and died after the third dose of stilbamidine. Two patients relapsed after treatment. Nine patients have been observed for only a few months, but the remaining 10 patients have remained well for 15 to 24 months. Seabury[2] treated 12 cases with systemic disease with these drugs. Seven cases are well controlled, several for as long as two years. Three are now doing well under therapy. In two cases treatment failed. Murphy[2] has had good results in two cases but has also had two failures. Stilbamidine therapy is not without serious complications. Nitroid crisis, with sweating, vomiting, and collapse can occur. Destructive lesions in the kidneys and liver are also recorded. These two complications can be avoided by proper preparation and administration of the drug. However, facial neuropathy consisting of numbness or paresthesias in the skin of the face supplied by the sensory portion of the fifth nerve occurs in most patients. There is no satisfactory remedy for this.

2-hydroxystilbamidine is somewhat less toxic than stilbamidine and only rarely produces facial neuropathy. This would seem the drug of choice. Its results are so good and toxicity so slight that its use in pulmonary lesions is probably indicated in all medical cases. In those cases in which tissue is resected as a diagnostic procedure probably treatment with this drug after operation should be employed. Unfortunately these drugs are expensive at present. Further experience is necessary to determine the best treatment regime and the results of treatment with these drugs.

The dramatic results of these drugs should not allow us to forget other methods of treatment, some of proven value, some not yet proved. The application of our knowledge of immunology to this disease and its correlation with the use of iodides seems basic. Weisel and Landis[20] have reported 7 consecutive cases of pulmonary blastomycosis, most of which were apparently cured by iodides given orally or by aerosol nebulizer. This remarkable result was achieved without the use of the stilbamidine group of drugs. Undecylinic acid seems to have been of value in some. Basic therapy with good diet and bed rest should be remembered. However, prolonged bed rest does not appear important in the postoperative care in most patients, for most of those having pulmonary resections were up and about at limited activity early after surgery with good results. Further observations of these methods of therapy is certainly desirable, especially since failure to respond to stilbamidine and 2-hydroxystilbamidine has been demonstrated by some patients.

Indications for Surgery

Indications for pulmonary resection have been rather indefinite but it now seems possible to formulate fairly clear indications. Resection should be undertaken as a combined diagnostic and therapeutic measure in certain situations when a mass of undetermined etiology is found in the lung. There should be little if any opposition to this indication because of the satisfactory results obtained from resection and because of the low mortality accompanying operation.

If the diagnosis of blastomycosis is known before operation, an effort to cure the patient by medical therapy should be undertaken first. Probably a prolonged course of aromatic diamidine therapy should be given in an effort to eradicate the disease. If it is not cured and residual localized activity remains, or if there are cavities which fail to close, then resection of the areas involved should be performed. It would seem best in our present state of knowledge to employ 2-hydroxystilbamidine before operation and for a while afterwards, in the same way in which resection for pulmonary tuberculosis is covered by chemotherapy.

Surgical Treatment

Pulmonary blastomycosis sometimes occurs as a localized lesion though usually it is diffuse in the lung. In the localized lesions excisional therapy has seemed rational. It now seems reasonable to consider resectional therapy for blastomycosis in the light of resectional therapy for tuberculosis, coccidiomycosis and histoplasmosis. Thirty-two cases of pulmonary resection in pulmonary blastomycosis, including the new case presented in this paper, are reviewed herein, (Table). At first resections were usually performed for lung

TABLE OF CASES RESECTED

AUTHOR	AREA RESECTED	POST OP TREATMENT	OUTCOME AND REMARKS
SMITH	Right upper lobe	K. I.	Died of disseminated disease 9 mos. post-op.
	Lobe	K. I., vaccine	No follow up—recent case.
WEBB	Right lung	None	Died the day after surgery of pulmonary edema.
FELD, CADDEN	Right upper lobe	K. I. (?)	Disseminated disease to lung, etc. at 3 weeks. Died 11 mos. after onset of symptoms.
LOWRY	Right lower lobe	None	Well 5 years post-op.
HOPKINS, MURPHY	Right lung	K. I.	Spread to opposite lung 10 days post-op. Right empyema. Died disseminated disease 6 mos. post-op.
	Left lung	K. I. undecylenic acid	Developed systemic spread which responded to undecylenic acid. Well 2 years post-op.
WEISEL, LANDIS	Right lower and middle lobe	None	Well 3 years 10 mos. post- op.
	Right upper lobe	None	Well 4 years post-op.
BEUCHNER,	Right lower lobe	None	Well 2 years post-op.
et al	Right upper lobe	Blastomycin human serum K. I. 2-hydroxystilbamidine	One month later remaining right lung flared up. Rib and transverse process involvement. Thoracoplasty, responded to medical treatment. Well 18 mos. later.
CUMMINGS, et al	Right upper lobe	K. I. Stilbamidine	One year post-op. skin lesions appeared and cleared fast on stilbamidine. Well 15 mos. post-op.
HUGHES	Left upper lobe with part of lower lobe	None	Well 33 mos. post-op.
SEALY, et al	Left upper lobe	Blastomycin K. I.	After two weeks disease spread to contralateral lung —then cleared. Well 21 mos. post-op.
	Right lung	Blastomycin	Well 18 mos. post-op.
WHITE,	Left lung	None	Generalized dissemination. Died 6 days post-op.
OWEN	Right lower lobe	None	Died 18 hours post-op. in status asthmaticus.
	Left lung	None	Well 14 mos. post-op.
	Right middle lobe	Stilbamidine	Suspected spread in right lung. Well 10 mos. post-op.
KUNKEL, et al	Left upper lobe	vaccine K. I.	Infection with blastomycosis in opposite chest wall with osteomyelitis or ribs. Living with disease 3 years post-op.
	Right lung	Vaccine K. I.	Well 1 year 10 mos. post-op.
	Right upper lobe, superior segment right lower lobe	Vaccine	Well 1 year 10 mos. post-op.
	Left upper lobe, part of lower lobe	K. I. Undecylenic acid	Well 3 mos. post-op.
	Wedge resection right lower lobe. Thick walled cavity.	None mentioned in brief account	Brief presentation given in report. Well 1 month post-op.
	Right upper lobe		Well 2 years 3 months post-op. Patient diagnosed at Mayo Clinic, resected elsewhere.
ACREE, et al	Left lung	K. I.	Chest wall infection with blastomycosis and skin nodules. Died of cardiac arrest while undergoing rhizotomy for pain. Died 2-3/4 years post-op.
	Right lung	Vaccine K. I.	Well 5 years 2 months post-op.
	Left upper lobe	Iodides for 2 yrs.	Well 5-1/2 years post-op.
	Right upper lobe	None	Died 5 mos. post-op. of coronary occlusion.
	Left upper lobe	None	Died in immediate post-op. period from pheochromocytoma found at autopsy.
	Left lower lobe with large cavity	2-hydroxystilbamidine	Exudative lesion of lungs were markedly improved before surgery treated by 2-hydroxystilbamidine. Skin lesions had gone before surgery. Well 8 months post-op.
TAYLOR	Right upper lobe	Stilbamidine	Well 3 years post-op.

lesions of unknown etiology. Later, deliberate resections were performed for this disease. This type of therapy in blastomycosis is a new and relatively unexplored field. There naturally arise many questions pertinent to the response of the body to this treatment, to factors of prognostic importance, and to the indications for surgery. In reviewing these cases analyses were made in an attempt to answer these questions.

It is most interesting to see what happened when these lung lesions were resected without the support of vaccine or drug therapy. There were 10 such cases. Four deaths occured in the immediate postoperative period. Only one of these deaths resulted from a spread. In this case, general dissemination occurred and death followed 6 days after surgery. The other 3 deaths were from severe asthma, pulmonary edema, and an unrecognized pheochromocytoma. The 6 patients surviving surgery were all well at last report except one who died of coronary heart disease 5 months after operation. Thus, resection by itself was effective treatment.

A consideration of the overall results of the 32 resections under review shows the following: About two thirds of this group were apparently cured. One patient was alive but still had blastomycosis and in one case there was no follow up. Twenty-two cases were seemingly cured.

There were 3 deaths in the immediate postoperative period, as mentioned above, from causes other than a continuation of the blastomycotic infection. There were also 5 additional deaths from blastomycosis after resection. Of these 32 cases of resection only 5 had the benefit of stilbamidine or 2-hydroxystilbamidine.

Recurrence after Resection

Spread of the disease after resection occurred in 11 cases or roughly one third of the group. This became manifest in one patient only a few days after surgery while in another it was a year before onset. These recurrences usually became manifest a few weeks after operation. One patient died from a spread as early as 6 days after operation. Another one is still alive with the disease under control 3 years postoperatively. In 5 cases the recurrence was fatal, in 5 it was apparently cured, and in one the disease is still active. Stilbamidine was used in 3 of the patients with recurrences who survived, but in none of the other recurrences. Undecylinic acid is credited with curing one recurrence. Obtaining a favorable immunologic status by blastomycin in conjunction with iodide therapy was utilized in saving another patient with a recurrence. Murphy[2] reports one recurrence after lobectomy which has not responded to iodides, undecylinic acid, or stilbamidine.

Factors of Prognostic Significance

In an effort to determine factors important to the prognosis in these cases of pulmonary resection the preoperative roentgenographic appearance of the lesion was investigated. In pulmonary tuberculosis, exudative or so called "soft" lesions have been shown to respond poorly to surgery, but "hard" lesions have responded better. Buechner, *et al*[3] noted in two cases of pulmonary blastomycosis that the one with a "soft" appearance developed a spread and did poorly after operation while the other demonstrating a "hard" appearance did well. They conjectured about this being of significance.

To investigate this factor further the preoperative roentgenograms of the patients in this review were divided roughly into "hard" and "soft" groups. In 23 cases it was possible to classify the lesion as "hard" or "soft". Of the 15 cases which seemed to fall into the hard group one died at the time of surgery from an unrecognized pheochromocytoma. Four of the 14 cases surviving surgery had a spread of their disease. Of those with spread 2 recovered and 2 died from a continuation of the infection. One of the latter died on the operating table, showing fairly good resistance to the disease, two and a half years after pulmonary resection. The rest were all without evidence of the disease when last heard from.

In contrast, those patients showing a "soft" picture on roentgenography comprised 8 cases in which one surgical death occurred from pulmonary edema. In the remaining 7 cases, 4 spreads occurred all within a month after surgery. One of these died from the disease, one

was alive with the disease under fair control and the other 2 were well.

From the above data it appears that the roentgenographic appearance is of prognostic significance, the "soft" lesions responding poorly and the "hard" lesions well to resection.

Another factor of prognostic significance in surgery seems to be the immunologic status of the patient. The outcome of the disease in its natural history is closely correlated with the immunologic response of the patient to it. Sealy, *et al*[13] have presented data showing how the immunological status of the patient undergoing surgery can be used to advantage. In order to see how the immunologic types fared under pulmonary resection the 13 cases which had immunologic studies performed either preoperatively or postoperatively were scrutinized. A simple division was made by dividing these patients into skin positive and skin negative groups. Five fell into the group with positive skin tests. This constitutes a more favorable group immunologically than the group with negative skin tests, according to Simth.[14] In none of these 5 was there any postoperative spread and all were well. By contrast 8 had negative skin tests and fell into the less favorable group. Half of these had spreads of the disease postoperatively and one died. Stilbamidine was only employed twice, once in each group. From this review it appears that the immunologic status of the patient bears an important relationship to his response to resection.

Case Report

The following case comprises my experience with resection in blastomycosis. This patient was under the care of Drs. Isaac Manning, H. M. Schiebel and the author.

History: A 38 year old white lawyer, was admitted to Watts Hospital, Durham, N. C. on May 31, 1952. He lived in central North Carolina. He complained of a "lump in the throat" of three weeks duration especially on swallowing. For three months there had been an increase in a chronic cough that had been present for about twenty years. Ten days before admission he coughed up a small fleck of blood. Night sweats occurred once. There was mild pain in the right anterior upper part of the chest after coughing on one occasion. Flouroscopy of the chest three months before admission had not revealed any abnormalities. He had felt tired for one month. His past history included chronic sinusitis for 20 years and a submucus resection.

Physical Examination: There was dullness to percussion over the medial half of the upper right anterior part of the chest. There were occasional rales over the posterior medial right side. There were no skin lesions.

Initial laboratory studies: On admission to the hospital roentgenograms of the chest demonstrated a lesion that appeared to extend out from the upper portion of the right hilum and which was dense, well circumscribed, and merged with the mediastinum at the apex of the right lung. An upper gastro-intestinal series showed a persistent indentation opposite the fourth thoracic vertebra on the right. The stomach and duodenum were not remarkable. Sputum studies for malignant cells were negative. Smears and cultures for acid fast organisms and fungi were negative. Blood studies showed normal values: R.B.C. 5,600,000; W.B.C. 8,800 with a normal differential count. A tuberculin skin test was positive in a dilution of 1:100. No other skin tests were performed. Urinalysis showed no abnormality.

During the hospital stay before operation there was no change in the clinical picture or in the appearance of the lesion. He ran a slight fever of 99° F. Esophagoscopy and bronchoscopy showed no abnormalities. We were unable to decide whether the lesion was primarily mediastinal or pulmonary. No positive diagnosis was made. Exploratory thoracotomy was decided upon and on June 9, 1952 a right thoracotomy was performed and a firm lesion in the upper lobe, which was densely adherent to the upper mediastinal structures, was found. An extra-pleural resection of the right upper lobe was performed. The mass was difficult to separate from the superior vena cava and azygos vein and at one point lung tissue was torn. Some of this was sent for frozen section, which showed inflammatory tissue. As much of the dense inflammatory tissue along the mediastinal structures was removed as could be safely excised.

The patient ran a smooth postoperative course. Sections of the pulmonary lesion showed blastomycetes as did cultures. As soon as the diagnosis was known, 48 hours after surgery, stilbamidine was started beginning with 50 mg. intravenously. The second day 100 mg. of stilbamidine and thereafter 150 mg. of stilbamidine were given daily intravenously. About 3 days following the start of this drug the patient developed a rather extensive purplish erythematous eruption over the posterior portion of the chest, and neck which cleared when pyribenzamine was administered. The patient was given a total of 4 gm. of stilbamidine over a period of 28 days. A skin test for blastomycosis 2 days after operation was positive with a papule no more than 0.5 cm. in diameter. Another skin test 2 weeks later showed an area of erythema and a papule totaling 1.5 cm. in diameter. This was considered a definitely positive test.

When he was discharged from the hospital one

month after surgery he was doing well. A trigeminal neuralgia developed several months later. He has been carefully followed and has remained well for 3 years.

Discussion

In the past few years there have been many striking changes in the field of blastomycosis, in basic concepts of the disease itself, in drug therapy, and in the realization that resectional surgery is effective treatment. A new concept of blastomycosis has arisen to challenge the classical division of the disease into two entities, the cutaneous and systemic. The cutaneous form has been thought to be limited usually to the skin without systemic invasion. Evidence pointing to actual systemic involvement in almost all cases including the cutaneous type has recently been presented and championed by Schwarz and Baum[12] and Kunkel, *et al.*[8] They believe that the lung is the primary focus of infection. If this is proven to be true, pulmonary resection has a sound basis in that resection of the primary focus is a logical approach to the prevention of further spread and to the eradication of the disease.

At about the time when the role of resection in the treatment of pulmonary blastomycosis was being clarified the stilbamidine group of drugs appeared. They have proven to be formidable drugs against this disease but have toxic side effects and must be administered carefully. Suffice it to say that our knowledge of the benefits from applied immunology, our expanding armamentarium of drugs, and our application of excisional surgery has brought an optimistic outlook to patients afflicted with this disease.

This review of the role played by pulmonary resection in blastomycosis has demonstrated a good response to this form of treatment. It strongly suggests that, as in tuberculosis, exudative lesions in blastomycosis appear to be a factor indicating a poor prognosis. These "soft" lesions are more dangerous and the incidence of postoperative spread greater than in the "harder" lesions. A favorable immunologic status of the patient is a factor favorable to the surgical patient. The problem of postoperative recurrences can usually be successfully managed by immunologic therapy and biochemicals, though in some patients the disease progresses despite all therapy.

Summary

1. A review of the literature reveals 31 cases of pulmonary blastomycosis treated by resection. An additional case is reported.

2. Pulmonary resection is well tolerated and is often curative in itself. More than two-thirds of those resected survived surgery and are apparently cured.

3. Pulmonary resection is indicated in those cases of known blastomycosis in which there remain residual active localized disease or cavities that fail to close after treatment with 2-hydroxystilbamidine or stilbamidine. Resection is also indicated as a diagnostic and therapeutic measure when a mass of undetermined etiology is found in the lung.

4. Factors of prognostic importance to surgery were found. Patients whose roentgenograms showed soft lesions fared poorly after surgery, those with hard lesions responded better. Those patients falling into a favorable immunologic group responded favorably to surgery; those in an unfavorable group responded unfavorably.

5. 2-Hydroxystilbamidine and stilbamidine have apparently greatly improved the outlook in this disease.

6. Important contributions to the natural history of blastomycosis are continually being made. Also many concepts concerning the prognosis and behavior of this disease have been recently challenged.

Addendum

Since the preparation of this article two additional cases of pulmonary resection have been noted. Kunkel, *et al* record the case of a man with a history of systemic blastomycosis extending back at least 18 years. Left upper lobectomy and resection of the superior segment of the left lower lobe were performed in 1951. Twenty seven months later he was being treated with stilbamidine for a recurrence in the left lower lobe. Smith, *et al*[17] report a man undergoing a left upper lobectomy in June, 1954, who made an uneventful recovery without chemotherapy.

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OFFICE PROCEDURES—By Paul Williamson, M. D., 412 pages. W. B. Saunders Co., Philadelphia—London, 1955. Price $12.50.

This is a book with much sound advice concerning office procedures. The book furnishes quick references for procedures in various subspecialties written simply and primarily for the general practitioner.

Although the material is well illustrated and presented, the book, it seems to this reviewer, gives information concerning procedures best handled in a hospital or by a specialist in one of the fields covered. For instance, the chapter on cystoscopy begins "The Brown-Buerger cystoscope is an instrument which will prove valuable and which every physician should know how to use."

There is also a section on tendon repair which is probably beyond the scope of the average general practitioner with the average office equipment.

In the section on internal medicine there is a brief discussion of the technique of electrocardiography which may just as well have been omitted.

In spite of these defects this book is a valuable book for quick reference for the general practitioner's office.

Arthur V. Williams, M. D.

CURRENT THERAPY 1956. Latest Approved Methods of Treatment for the Practicing Physician. Editor: Howard F. Conn, M. D. W. B. Saunders Co., Philadelphia. Price $11.00.

This is the eighth of an annual series which has established itself as a reliable and up-to-the-minute source of information for the practitioner. Some of the material is repeated from last year's edition, but the introduction of new methods and new authors adds a freshness which maintains the reputation of the series as a very desirable practical working instrument for the man in active practice.

—J. I. W.

ONE HUNDRED AND EIGHTH
ANNUAL SESSION
SOUTH CAROLINA
MEDICAL ASSOCIATION
May 15, 16, 17, 1956
OCEAN FOREST HOTEL
MYRTLE BEACH, S. C.

GENERAL PROGRAM

Monday, May 14

3:00 P. M. Meeting of Council

Tuesday, May 15

9:00 A. M. Meeting of Council
10:00 A. M. House of Delegates Convenes (Ball Room)
1:00 P. M. Adjournment (Until 9:30 A. M. Wednesday)
3:00 P. M. Meetings of Reference Committees

Wednesday, May 16

9:00 A. M. to 12:30 P. M. Scientific Films
9:30 A. M. House of Delegates Resumes (Ball Room)
12:30 P. M. Alumni Luncheon
3:00 P. M. Scientific Session (Ball Room)
5:30 P. M. Adjournment
8:30 P. M. Entertainment presented by Woman's Auxiliary

Thursday, May 17
(Ball Room)

9:00 A. M. Memorial Service
9:15 A. M. President's Address
9:45 A. M. Scientific Session Resumed
12:45 P. M. Luncheon Recess
2:15 P. M. Scientific Session Resumed
5:30 P. M. Adjournment
8:00 P. M. Annual Banquet for Alumni Association and Guests

HOUSE OF DELEGATES

Dr. O. B. Mayer, Presiding

Order of Business

Tuesday, May 15

10:00 A. M. Call to Order
Invocation
Report of Credentials Committee
Opening Remarks by the President
Introduction of President-Elect
Announcement of Reference Committees
Presentation of Resolutions and Recommendations
11:00 A. M. Introduction of Officers and Guests of Woman's Auxiliary
Reports of Officers
The Executive Secretary
The Secretary
The Treasurer
The Editor of the Journal
The Chairman of Council
The Delegates to the A.M.A.
Reports of Standing Committees
(The reports of the Committees will have been published in the Journal and will not be read before the House. Any supplementary remarks by the Chairmen will be heard at this time.)
Unfinished Business
New Business
12:15 P. M. (Special Order) The Annual Meeting of the Corporation, The South Carolina Medical Care Plan
1:00 P. M. Adjournment Until 9:30 A. M. Wednesday
3:00 P. M. Meetings of Reference Committees (All members of the Association are invited to appear before the Committees considering matters in which they are interested. Meeting places will be announced.)

Wednesday, May 16

9:30 A. M. Call to Order
Reports of Reference Committees
11:15 A. M. Presentation of Annual Essay Contest Award
11:30 A. M. Annual Elections
Officers:

President-Elect	Secretary
Vice-President	Treasurer

Delegate to the A.M.A. (2-yr. term)
(The term of Dr. George Dean Johnson, expires December 31, 1956.)
Councilors: (3-yr. terms)
Third District (The term of Dr. H. B. Morgan expires)
Sixth District (The term of Dr. J. P. Cain, Jr. expires)
Ninth District (The term of Dr. D. L. Smith expires)
Members of Mediation Committee: (3-yr. terms)
Third District (The term of Dr. R. Brooks Scurry expires)
Sixth District (The term of Dr. Walter R. Mead expires)
Ninth District (The term of Dr. James H. Sanders expires)
Members of State Board of Medical Examiners: (4-yr. terms)
Sixth District (The term of Dr. E. Marvin Dibble expires)
Member at large (The term of Dr. Harold E. Jervey, Jr. expires)
Members of Executive Committee of State Board of Health (7-yr. terms)
(The terms of all physician members of the Executive Committee expire this year:

Dr. W. R. Barron	Dr. Richard W. Hanckel
Dr. L. D. Boone	Dr. W. R. Mead
Dr. E. W. Camp, Jr.	Dr. Keitt H. Smith
Dr. W. R. Wallace	

Members of Hospital Advisory Council to State Board of Health.
(The term of Dr. B. J. Workman expires)
(The term of Dr. Roderick Macdonald expires)
Selection of Place for the 1957 Annual Meeting

Program, Scientific Session

Annual Meeting

May 15th, 16th and 17th, 1956

WEDNESDAY, MAY 16, 1956

For the benefit of those doctors who will not be attending the meeting of the House of Delegates, the following scientific films will be shown at times specified in the small dining room:

9:15 A. M. "The Diagnosis of Uterine Malignancies"
9:35 A. M. "Use of the Artificial Kidney"
10:00 A. M. "Progressive Muscular Atrophies, Dystrophies, and Allied Conditions"
10:30 A. M. "Dermatoses of Industrial Workers"
11:05 A. M. "Nephrosis in Children"
11:40 A. M. "Psychoneuroses"
12:30 A. M. "Diagnosis of Cancer of the Stomach by Cytologic Methods"

SCIENTIFIC SESSION

O. B. Mayer, M. D., President, presiding

3:00 P. M. "The Medical Aspects of Cerebral Palsy"
Meyer A. Perlstein, M. D., Chicago, Illinois
3:30 P. M. "Treatment of Aneurysm and Occlusive Diseases of the Aorta"
Denton A. Cooley, M. D., Houston, Texas.
4:00 P. M. Recess to visit exhibits.
4:30 P. M. Panel: "The Uses and Abuses of ACTH and Cortisone"
Moderator: David F. James, M. D., Atlanta, Georgia
Allergist: Kelly T. McKee, M. D., Charleston, S. C.
Anesthesiologist: William S. Howland, M. D., New York, New York
Pediatrician: Louis K. Diamond, M. D., Boston, Massachusetts

THURSDAY, MAY 17, 1956

9:00 A. M. Memorial Service
9:15 A. M. The President's Address—O. B. Mayer, M. D., Columbia, S. C.
9:45 A. M. "The Clinical Importance of Human Blood Groups"
Louis K. Diamond, M. D., Boston, Massachusetts
10:15 A. M. "The Induction of Labor"
C. Hampton Mauzy, M. D., Winston-Salem, North Carolina
10:45 A. M. Recess to visit exhibits
11:15 A. M. Panel: "The Newer Aspects of Blood Dyscrasias"
Moderator: Charlton DeSaussure, M. D., Charleston, S. C.
Hematologist: Claude Starr Wright, M. D., Augusta, Georgia
Surgeon: C. Stuart Welch, M. D., Albany, New York
Gynecologist: C. Hampton Mauzy, M. D., Winston-Salem, N. C.
Pediatrician: Louis K. Diamond, M. D., Boston, Massachusetts
12:45 P. M. Luncheon Recess.
2:15 P. M. Panel: "Peripheral Vascular Disease"
Moderator: Hiram L. Brockman, M. D., Spartanburg, S. C.
Internist: William T. Foley, M. D., New York, New York
Surgeon: Denton A. Cooley, M. D., Houston, Texas
Radiologist: Harold S. Pettit, M. D., Charleston, S. C.
3:30 P. M. Recess to visit exhibits.
4:00 P. M. Clinico-Pathologic-Therapeutic Conference (see protocol)
Moderator: F. E. Kredel, M. D., Charleston, S. C.
Surgeon: C. Stuart Welch, M. D., Albany, New York
Internist: William T. Foley, M. D., New York, New York
Radiologist: Harold S. Pettit, M. D., Charleston, S. C.
Pathologist: H. Rawling Pratt-Thomas, M. D., Charleston, S. C.

Speakers For Annual Meeting

W. S. HOWLAND, M. D.

Dr. Howland was born in Savannah, Georgia, in 1919 and received his B.S. degree from Notre Dame University in 1941 and the M.D. degree from Columbia University College of Physicians and Surgeons in 1944. His graduate training included a surgical internship at Grady Hospital, Atlanta, Georgia (1944-45), Assistant Residency in Urology at the Grady Hospital (1945-46). He was Chief of the Urology Section, 121st General Hospital (U. S. Army), Bremerhaven, Germany, (1946-48) following which he took training in anesthesiology at the Presbyterian Hospital, New York, 1948-1953. Since 1953, he has been Attending Anesthesiologist at Memorial Hospital (New York), and is Associate Professor of Surgery (anesthesiology) at Cornell University Medical College and Associate in the Division of Experimental Surgery at the Sloan-Kettering Institute (New York).

D. F. JAMES, M. D.

Dr. James was born in Washington, D. C., in 1914. He received the B.S. degree from Catholic University in 1936, and the M.D. degree from George Washington University School of Medicine in 1940. His internship was taken at the U. S. Marine Hospital in Baltimore, and he served as Medical House Officer at the Peter Bent Brigham Hospital in Boston (1941-42). Dr. James served in the Army of the United States (1942-46) after which he spent two years in graduate training in Internal Medicine at Grady Hospital (Atlanta). He is Clinical Assistant Professor of Medicine at Emory University Medical School, and Physician in Chief at Emory Hospital.

W. T. FOLEY, M. D.

Dr. Foley was born in New York City in 1911. He received his A.B. degree from Columbia University in 1933, and his M.D. degree from Cornell University Medical College in 1937. He interned at the U. S. Naval Hospital in Philadelphia, following which he served in the U. S. Navy for eight consecutive years in the Orient. During this time he was an Instructor at Hong Kong University Medical College. Dr. Foley was a prisoner of war of the Japanese Army (1941-1945). He took a preceptorship in Vascular Disease under Dr. Irvin S. Wright (1945-1949). At present, he is Assistant Professor of Medicine at Cornell University Medical College and Chief of the Vascular Clinic at the New York Hospital, where he is Assistant Attending Physician.

F. E. KREDEL, M. D.

Dr. Kredel was born in Pittsburgh, Pennsylvania, in 1903. He received the B.S. degree in 1924 and the M.S. degree in 1927, both from the University of Pittsburgh, graduating from the Johns Hopkins University School of Medicine in 1929. He served as a Graduate Fellow in Harvard University

during the summers of 1927 and 1928. Dr. Kredel took his graduate training in the surgical residency of the University of Chicago Clinics from 1929 to 1936. In 1936, he was Senior Staff Surgeon at Pittsburgh, and has been on the faculty of the Medical College of South Carolina since 1937, where he has been Professor of Surgery since 1938, and Head of the Department since 1943. He is Surgeon in Chief of the Medical Center Hospitals.

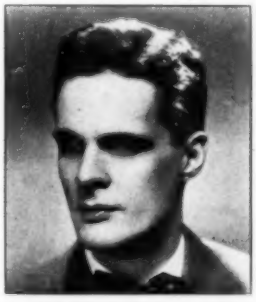
D. A. COOLEY, M. D.

Dr. Cooley was born in 1920 in Houston, Texas. He received his B.A. degree from the University of Texas in 1941, and the M.D. degree from the Johns Hopkins University School of Medicine in 1944. He had his surgical training in the residency at Johns Hopkins Hospital under Dr. Alfred Blalock from 1944 to 1950, and then served as senior Surgical Registrar at the Brompton Hospital, London, England, from 1950 to 1951 under Sir Russell Brock. Since 1951 he has been in the Department of Surgery at Baylor University College of Medicine, Houston, Texas, where he is Associate Professor of Surgery.

M. A. PERLSTEIN, M. D.

Dr. Perlstein was born in 1902 in Chicago, Illinois. He received his M.D. degree from Rush Medical College in 1927. After internship at Cook County Hospital, he had postgraduate training at the Illinois Postgraduate Medical School. At present he is Professor of Pediatrics at the Cook County Postgraduate School of Medicine, Associate Professor of Pediatrics at Northwestern University, Chief of the Children's Neurology Clinic at Cook County Hospital, Director of the Cerebral Palsy Project at Michael Reese Hospital, and Chief of the Medical Staff of the Illinois Children's Hospital-School. Dr. Perlstein is a founding member and former secretary of the American Academy of Cerebral Palsy and a past president of the same organization. He is a member of numerous professional societies, and serves as consultant to many institutions and organizations concerned with crippled children and cerebral palsy.

C. deSAUSSURE, M. D.



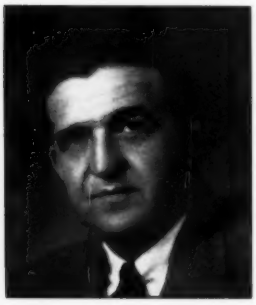
Dr. deSaussure was born at Fort Clark, Texas in 1920. He received the A.B. degree from Princeton University in 1942, and the M.D. degree from Johns Hopkins University in 1945. He interned and completed the medical residency at Barnes Hospital, Washington University School of Medicine, St. Louis, Missouri (1945-50) and since 1950 has been practicing internal medicine, with emphasis on hematology, in Charleston. Dr. deSaussure is Associate in Medicine at the Medical College of South Carolina.

L. K. DIAMOND, M. D.

Dr. Diamond was born in New York City in 1902. He received his A.B. degree from Harvard College in 1923, and his M.D. degree from Harvard Medical School in 1927. During the next five years he received graduate training in pediatrics and hematology. At present, he is Associate Professor of Pediatrics at the Harvard Medical School, Associate Medical Chief of the Children's Hospital in Boston and Director of the Hematology Laboratory and Blood Grouping Laboratory at the Children's Medical Center. He

is a consultant to numerous hospitals and a member of special committees for the National Research Council and the National Institutes of Health.

C. H. MAUZY, M. D.



Dr. Mauzy was born in Harrisonburg, Virginia in 1908. He received his M.D. degree from the University of Virginia School of Medicine in 1933. Following internship at Cleveland City Hospital (1933-34) and Duke Hospital (1934-35) he underwent residency training on Obstetrics and Gynecology at the Gallinger Municipal Hospital, Washington, D. C. (1936-37) and the University of Virginia Hospital (1935-36 and 1937-38). He is now Associate Professor of Obstetrics and Gynecology at the Bowman-Gray School of Medicine of Wake Forest College, and is a member of the Attending Staff of the North Carolina Baptist Hospital, Winston-Salem, North Carolina.

C. S. WRIGHT, M. D.

Dr. Wright was born in Laurens, South Carolina, in 1917. He graduated from the University of South Carolina in 1939 and received his M.D. degree from the Medical College of South Carolina in 1942. After internship at the Columbia Hospital (S. C.) of Richland County, and an Assistant Residency in Medicine at the Barnes Hospital, Washington University School of Medicine, St. Louis, Missouri, he served consecutively as Research Foundation Fellow, Baruch Fellow in Medical Research, Chief Resident in Hematology, and Julius F. Stone Fellow in Medical Research, all under the Department of Medicine, Ohio State University, Columbus, from 1944 to 1947. For the next eight years he was a member of the faculty of Ohio State University and is now Associate Professor of Internal Medicine at the Medical College of Georgia in Augusta. He holds membership in numerous clinical and research organizations and is consultant to the Oak Ridge Institute of nuclear studies.

C. S. WELCH, M. D.

Dr. Welch was born in Newburyport, Massachusetts in 1909. He received his M.D. degree from Tufts University in 1932 and interned in the Boston City Hospital from 1932 to 1934. He served a fellowship in surgery at the Mayo Clinic from 1934 to 1937, receiving M.S. and Ph.D. degrees from the University of Minnesota in 1937. Dr. Welch is Associate Professor of Surgery at Albany Medical College and Attending Surgeon at the Albany Hospital. He is a Fellow of the American College of Surgeons, and a member of the American Surgical Association, New England Surgical Society, Society for Vascular Surgery, and Societé Internationale de Chirurgie.

H. S. PETTIT, M. D.

Dr. Pettit was born in Weston, West Virginia in 1914. He graduated from West Virginia University in 1934 and received his M.D. degree from the Northwestern University School of Medicine in 1938. He took postgraduate training in Pathology and Radiology at the Roosevelt Hospital in New York City, 1940-42, and in Radiology at the Peter Bent Brigham Hospital in Boston in 1946. He served in the U. S. Army Medical Corps from 1942 through 1945. Dr. Pettit is

Clinical Professor of Radiology at the Medical College of South Carolina, and Chief of the Radiology Services at the Medical College Hospital and Roper Hospital in Charleston.

K. T. McKEE, M. D.

Dr. McKee was born in Bristol, Tennessee, in 1916. He received the B.A. degree from Emory and Henry College in 1938, and the M.D. degree from the University of Virginia School of Medicine in 1941. His training included internship at the Cincinnati General Hospital (1941-42), fellowship in Cardiology, University of Virginia Hospital (1942-43), fellowship in Allergy, University of Virginia Hospital (1946-47), assistant residency in Medicine, University of Virginia Hospital (1947-48), and service as Medical Resident and Teaching Fellow in Medicine, Roper Hospital and Medical College of South Carolina (1948-49). Dr. McKee is Associate Professor of Medicine at the Medical College of South Carolina. He is a diplomate of the American Board of Internal Medicine, and holds membership in Alpha Omega Alpha, the Southeastern Allergy Association and the American College of Physicians.

H. L. BROCKMAN, JR., M. D.

Dr. Brockman was born in Greer, S. C. in 1921 and received his B.S. degree from Furman University in 1942, graduating from the Medical College of South Carolina in 1944. His training has been as follows: Rotating Internship (Roper Hospital, Charleston, S. C.) 1944-45, Internship in Surgery (Duke Hospital) 1947-1948, Assistant Resident and Resident in Surgery (both at Jefferson Davis Hospital, Houston, Texas) 1949-52, Research Fellow in Cardiovascular Surgery (Baylor University College of Medicine, Houston, Texas) and Instructor in Surgery, 1952-54, and Instructor in Gross Anatomy (University of Maryland School of Medicine, Baltimore, Maryland) 1948-49. He served in the Army Medical Corps from 1945 to 1947. Dr. Brockman was certified by the American Board of Surgery in 1954 and at present is on the staff of the Spartanburg General Hospital and the courtesy staff of the Greenville General Hospital.

H. R. PRATT-THOMAS

Dr. Pratt-Thomas was born in Barnsley, England in 1913. He was reared in Sumter County, South Carolina, and received his A.B. degree from Davidson College in 1934 and his M.D. degree from the Medical College of South Carolina in 1938. He received his internship and residency training at the Cincinnati General Hospital. He is a member of the American Medical Association, Southern Medical Association, South Carolina Medical Association, and American Association of Pathologists and Bacteriologists. He is a former chairman of the Section on Pathology of the Southern Medical Association and a member of the faculty of the Southern Pediatric Seminar. He is a diplomate of the American Board of Pathology and is the consultant in pathology at the Charleston Naval Hospital. He has written some thirty scientific articles and is a member of the national honorary scholastic medical society, Alpha Omega Alpha. Dr. Pratt-Thomas is Professor of Pathology at the Medical College of South Carolina.

WOMAN'S AUXILIARY
SOUTH CAROLINA MEDICAL ASSOCIATION

President: Mrs. C. R. May, Jr., Bennettsville, S. C. **Publicity Secretary: Mrs. N. D. Ellis, Florence, S. C.**

TENTATIVE PROGRAM
THIRTY-FIRST ANNUAL CONVENTION OF THE WOMAN'S AUXILIARY TO THE SOUTH CAROLINA MEDICAL ASSOCIATION
Ocean Forest Hotel, Myrtle Beach, S. C.
May 15, 16, and 17, 1956

PRELIMINARY MEETINGS
Tuesday, May 15, 1956
Ocean Forest Hotel, President's Room

3:00 P. M.—Student Loan Fund Committee—Mrs. David F. Adcock, Columbia, Chairman.

4:00 P. M.—Jane Todd Crawford Memorial Nurses' Loan Fund Committee—Mrs. Bryan Michaux, Dillon, Chairman.

5:00 P. M.—Finance Committee—Mrs. George Dawson, Florence, Chairman.

Wednesday, May 16, 1956

9:00 A. M.—Auxiliary Committee with Council of Medical Association.

11:00 A. M.—Executive Board Meeting, Mrs. Charles R. May, Jr., President persiding.

1:30 P. M.—Executive Board luncheon. Dunes Club.

3:00 P. M.—Round Table Discussion, County Presidents and Presidents-elect, Mrs. Gordon Able, Newberry, President-elect presiding. Small dining room, Ocean Forest Hotel.

Thursday, May 17, 1956
Program
House of Delegates
Small Dining Room, Ocean Forest Hotel

9:30 A. M.—Mrs. Charles R. May, Jr., President, presiding, Bennettsville.
Mrs. Alfred Burnside, Parliamentarian, Columbia
Timekeeper—to be announced later.
Call to order.
Invocation—Mrs. John Martin, President Anderson Co. Aux.
Presentation of Honor Guests
Reports of Officers
Recommendations from Executive Board
Reports of Committee Chairmen
Reports of County Presidents
Report of S. C. Councilor, Woman's Aux. to Southern Medical Association
Report of Credential Chairman
Report of Nominating Committee
Election of Officers
Election of Delegates and Alternates to the Annual Convention of the Woman's Auxiliary to AMA, Chicago, Ill., June 11 to 15, 1956.
Announcements
Adjournment

Program Meeting
Small Dining Room, Ocean Forest Hotel
Thursday, May 17, 1956—11:00 A. M.

Call to Order
Invocation—to be announced later.
The Auxiliary Pledge—Mrs. Gordon Able, Newberry, President-elect.
Welcome—Mrs. R. L. Ramseur, Conway, President Horry County Auxiliary
Response—Mrs. Fritz Johnson, Mullins, President Pee Dee Auxiliary
Greetings—Dr. O. B. Mayer, Columbia, President South Carolina Med. Assoc.
Presentation of Dr. Wm. Prioleau, Charleston, President-elect South Carolina Med. Association.
Presentation of Honor Guests
Greetings—Mrs. John J. O'Connell, St. Louis, Mo., President Woman's Auxiliary to the Southern Medical Association
Greetings—Mrs. Robert Groom, President, Woman's Auxiliary to the North Carolina Medical Association.
Report of Delegate to 1955 Convention, Woman's Auxiliary to AMA, Atlantic City, June 1955.
In Memorium—Conducted by Mrs. H. W. Powe, Greenville, President-elect Greenville County Auxiliary.
Report of Convention—Mrs. J. K. Owens, Jr., Bennettsville, Chairman.
Report of President—Mrs. Charles R. May, Jr., Bennettsville.
Report of Committee on Courtesy Resolutions—Mrs. James Allgood, Inman, President Spartanburg County Auxiliary.
Installation of Officers—Mrs. Mason G. Lawson, President of Woman's Auxiliary to the American Medical Association.
Presentation of President's Pin—Dr. Charles R. May, Jr., Bennettsville.
Announcements
Presentation of Gavel and Pin to Incoming President
President's Greetings and Announcements—Mrs. Gordon Able, Newberry.
Adjournment

MEMBERSHIP LUNCHEON
Thursday, May 17, 1956

Main Dining Room, Ocean Forest Hotel—1:30 P. M.
Mrs. Mason G. Lawson, Little Rock, Ark., President Woman's Auxiliary to the American Medical Association, Guest Speaker.

POST CONVENTION BOARD MEETING—Small Dining Room, Ocean Forest Hotel
TIME: Immediately following Membership Luncheon
Mrs. Gordon Able, President, Presiding.

OCEAN FOREST HOTEL
HEADQUARTERS
1956 CONVENTION

Committee Reports 1955-56

COMMITTEE ON INDUSTRIAL HEALTH

In a joint meeting with the legislative committee on November 3, 1955 the question of loss of hearing in industry was discussed and it was of the opinion of those present that any legislation along this line would be premature.

The second meeting of the committee was held March 6, 1956 in Charleston, with five of the committee being present, and they would like to submit the following recommendations to the South Carolina Medical Association:

1. That industry include in its preplacement or preemployment examinations audiometric testing to be done as part of this examination on all individuals who are required to work in a noise hazard area. Also, that audiometric testing should be done at periodic intervals as indicated.
2. That when new industry moves into an area or when old industries are being enlarged with new equipment that the noise hazard problem be considered in the procurement of equipment. The noise hazard factor should also be considered in the replacement of old machinery wherever feasible.
3. That the S. C. Medical Association suggest to the S. C. Health Department the formation of a committee on Industrial Health to promote a program of industrial health education to Management.
4. That the Advisory committee to the State Industrial Commission advise that they include in their program an educational program to Management.
5. That the Advisory committee to the Industrial Commission be put on active status and have them function as an evaluation committee of non-scheduled disabilities which are of a controversial nature.

The following is the list of members of the Committee on Industrial Health:

Dr. J. L. Hughes, Chairman	Dr. J. Hughie Crooks
Dr. W. B. Townsend	Dr. K. B. MacInnis
Dr. Izard Josey	Dr. I. G. Linton
Dr. Leslie Meyer	Dr. W. P. Beckman
Dr. G. R. Laub	Dr. T. E. Whitaker
Dr. C. W. Evatt	Dr. G. W. Hammond

COMMITTEE ON HISTORICAL MEDICINE

This committee has continued to secure material which will some day be built into a history of medicine in South Carolina. It has not produced any publications, but seems to be approaching the time when something definite can be done about the writing of a book. The committee again requests that the Association appropriate the sum of $500.00, to be held along with the funds appropriated previously, against the time of publication. As before, the committee reminds the Association that if the history does not materialize the funds will be returned to the Association.

J. I. Waring, M. D., Chairman
Chapman Milling, M. D. R. M. Pollitzer, M. D.

COMMITTEE ON SCHOOL HEALTH

The committee held two meetings during the past year. Both were in the State Health Department offices in Columbia.

The first meeting was held on Sunday, September 26. The purpose of the meeting was to discuss again the broad purposes of school health as they affect particularly the private practitioner. Further discussion of the role of the dental profession in school health plans was carried on. A final draft of a letter

to each county medical society with enclosures pertaining to the aims and practices of school health committees was approved.

The second meeting was held on Monday, January 6, 1956 in joint session with a called meeting of the Joint Health & Education Committees of the respective State Departments of Health and Education. The purpose of the particular meeting was to discuss certain rules and regulations as well as laws on the statute books of South Carolina, which pertain to school health.

Our committee was very graciously received, and our participation in the discussions of the group was warmly encouraged.

By way of introduction, Dr. Sheriff (who is on the Joint Health and Education Committee, as well as our own school health committee) summarized the history and accomplishments of the committee. This group in the past has been instrumental in publication and distribution of standard health records; in effecting establishment of emergency routines in schools; in revising standards of public school architecture with particular reference to the health and safety of the pupils; and in establishing legal qualifications for school nurses.

In the discussion of the afternoon it was pointed out that there are many laws of South Carolina relating to the health of school children which are archaic, or partly so. Many alleged deficiencies were also pointed out. It was made clear that health cannot always be legislated. There are three ways by which better health practices might be brought about: Laws; regulations; and education. There are some health and safety matters pertaining to school children that must be legally enforced. Others cannot be enforced as laws but regulations in such matters are helpful. It is probably best that most matters of school health be brought about through education. No final conclusions were reached as to specific recommendations for legislation at the session. Our committee was invited to return whenever we could to the meetings of the joint committee. The fact that Dr. Sheriff is a member of both groups assures liaison between the official state organization, and our particular committee of the South Carolina Medical Association.

In addition to the formal meetings, two members of the committee, Drs. Paul and Sheriff, represented the State of South Carolina at the Fifth National Health Conference in Chicago which was held on October 23 and 24. Our impressions from the conference were that school health techniques are definitely coming of age. Much can be accomplished by education in hygiene. Much can also be accomplished by application of modern techniques of preventive medicine in its broadest sense. The exact role of the private practitioners or of the organized medical societies in these matters depends on many variables. It was the concensus of the group which discussed this particular aspect that some liaison between schools, health departments, and organized medicine is highly desirable, and that the greater the participation of the school health committees of medical societies particularly in the planning and deliberations of those who actually put school health into action in local communities, the more effective the plans will be, the less friction there will be between doctors and schools, and the greater will be the prestige in the all important sphere of public relations of organized medicine.

As above mentioned, letters together with packets of literature on school health were sent to each county medical society. The chairman has attempted to find out by a questionnaire letter how many medical societies have actually formed school health committees, and what activities their committees have had. Of the 37 questionnaires only four replies have been received. One reply from Rock Hill stated that a committee has been formed, but has not met. Another from Kingstree stated that the committee has not yet been appointed but is being planned. The committees in Charleston, Greenville, and Columbia have organized and are beginning to function. We have also been informed that there is a school health committee in Greenwood. It is hoped that in the next year many more committees will be formed and that organized medicine in South Carolina will at least begin to explore its opportunities in the field of school health. The committee would like to take this opportunity to express thanks to those who have started to work, and request that other local committees submit periodic reports of their activities so that we may be aware and take official recognition of them.

Respectfully submitted;
J. R. Paul, Jr., M. D.
Chairman

MEDICAL ADVISORY BOARD TO THE CRIPPLED CHILDREN SOCIETY OF SOUTH CAROLINA

This committee has continued to function in an advisory capacity. A meeting is held at least once a year at the time of the annual meeting of the Association.

This year the Crippled Children Society has provided one of the principal speakers for the scientific program.

It is believed that this committee serves a useful purpose, and its continuation is recommended.

Dr. J. I. Waring,	Dr. George Dean Johnson
Chairman	Dr. Joseph H. King
Dr. William Weston, Jr.	Dr. Sam G. Lowe, Jr.
Vice-Chairman	Dr. E. Walter Masters
Dr. John Bell	Dr. Julian P. Price
Dr. C. Guy Castles	Dr. John A. Siegling
Dr. T. R. Gaines	Dr. W. O. Whetsell
Dr. T. G. Goldsmith	Dr. O. B. Mayer,
Dr. James T. Green	(ex-officio)

Dr. Frederick E. Kredel

COMMITTEE TO STUDY THE FEASIBILITY OF REPLACING THE CORONER SYSTEM WITH A MEDICAL EXAMINER'S PANEL

Highlighting the work of this committee for the year was the meeting held in August at the Univer-

sity of South Carolina, sponsored by the South Carolina Medical Association and endorsed by the Columbia Medical Society and the Richland County Bar Association. Investigation has been underway by this committee for some years, and for the first time efforts have been successful in getting the Bar Association to work along with the doctors in this matter, not only participating, but in helping to plan for the meeting. In addition to the members of the two associations, circuit solicitors, judges, and other officials in the field of law enforcement throughout the State were invited to attend.

The speaker at the meeting on August 18th was Mr. Richard A. Myren, of the Institute of Government of the University of North Carolina. Mr. Myren is a consultant and instructor on forensic medicine, and an expert on that state's coroner problems. The findings in his report are credited with having contributed to the passing of a law in the North Carolina legislature in 1955 installing the medical examiner system on a county voluntary participation plan.

Mr. Myren's address related to the problems and solutions in regard to the coroner system in North Carolina, whose problems are very similar to those of our state, and his remarks were of great benefit in arousing interest in this problem in South Carolina.

Evidence of increased public interest in the coroner problem is being observed throughout the state, including not only doctors, but lawyers, newspapermen, and members of the lay profession as well. The Anderson County Medical Society recently had as its speaker Dr. Geoffrey Mann, Medical Examiner for the State of Virginia, with both doctors and lawyers in attendance at the meeting. The chairman of your committee has received letters from a doctor in Conway and a newspaperman in Greenville who are intensely interested in this problem, making it evident that interest is not confined to a limited group or area, but is spreading throughout the state.

It is realized that much work is yet to be done, and the objectives of your committee are: (1) More district meetings similar to the meeting arranged by the Anderson County Medical Society (2) Active participation by the local county bar association (3) Endorsement by the South Carolina Bar Association of a future study with the committee of the South Carolina Medical Association (4) A state wide meeting to be attended by the law enforcement officers comprising the various groups throughout the state (5) An intensive advertising campaign for the general public, to explain the advantages of the medical examiner panel over the coroner system.

The committee advises the following type of meeting, since it feels that organization of the various groups who should be interested in the establishment of the medical examiner's system can be best informed and the enthusiastic support toward our goal elicited.

(1) That a meeting be arranged either by the county or district medical society.

(2) That it be endorsed by the local Bar Association.

(3) That all law enforcement officers regardless of the various affiliations be invited *and urged* to attend.

(4) That a most capable speaker be engaged. (We feel that the State Medical Association should help defray expenses that may be incurred if the speaker is brought from a considerable distance.)

(5) That good press coverage be arranged so that the public can be well informed as to the purpose of the meeting, and the various advantages of the medical examiner system.

Respectfully submitted,

D. Strother Pope, M. D., Chairman
Harold P. Hope, M. D.
Joseph W. McMeans, M. D.
H. R. Pratt-Thomas, M. D.
R. F. Zeigler, M. D.

COMMITTEE ON INFANT MORTALITY

This committee is continuing on a program aimed toward stimulating interest in the care and problems of the premature infant. We feel that an educational approach to the problem will accomplish most at the present time. This plan was started last year by the committee headed by Dr. J. I. Waring. Nine geographically key towns were chosen as sites for seminars for both nurses and doctors. So far seminars have been held at Orangeburg, Lancaster and Florence. We plan to continue with seminars in the other locations as soon as their local societies can fit us into their schedules. The meetings have been well attended and may play a part in improving the status of premature care in South Carolina. They have been presented from the nursing, obstetric and pediatric point of view. We need to get the hospital administrator more interested in this problem.

At the annual meeting of the South Carolina Academy of General Practice, Dr. Hervey Mead arranged to have part of the program devoted to the premature infant in the form of a panel discussion. Also at this meeting, a booth on premature care was sponsored jointly by the Division of Maternal and Child Health, State Health Department and this Committee.

Through the efforts of the Division of Maternal and Child Health, reprints on oxygen therapy and its relation to retrolental fibroplasia were mailed to the doctors of the state.

We would like to thank the participants on the various programs for their effort and their time. Also, we want to thank the State Health Department, Dr. Hilla Sheriff in particular, for their cooperation and help in arranging and putting on these seminars.

A meeting of this committee is planned for late April in Columbia.

Respectfully submitted,
John C. Bonner, M. D., Chairman

COMMITTEE ON THE CARE OF THE INDIGENT

Whereas, Hon. James F. Byrnes, while governor of South Carolina, appointed, at the request of the South Carolina Hospital Association, a committee to study

the problem of the hospital care of the indigent patients in South Carolina, and

Whereas, this committee reached certain conclusions and made certain recommendations with which your present committee is not in sympathy, and

Whereas, these recommendations suggest the creation of a pool of some two million dollars (presumably by additional taxation), to be matched in part by federal contributions, to be turned over to the Department of Public Welfare, to be administered by them under statewide rules, and

Whereas, there are other suggested provisions which would further centralize the care of the indigent in Columbia, require more and more D. P. W. workers, higher and higher taxes, and contribute to the creation of an insatiable colossus, and

Whereas, if the townships and counties do not make better provisions for the care of their indigent than some at present do the state will surely eventually take over that responsibility, be it therefore,

Resolved, that the South Carolina Medical Association feels each township or county should take care of its own indigent patients, and be it,

Resolved, that the South Carolina Medical Association go on record hereby as urging each township or county to consider ways and means of caring properly for its indigent, and be it further

Resolved, that a copy of this resolution be sent to each county delegation of this state.

Norman O. Eaddy, M. D. Chairman
John T. Davis, M. D.
Wallace McNair, M. D.

MEDICAL EDUCATION FOUNDATION COMMITTEE

As chairman of the Medical Education Foundation Committee I wish to present, for your consideration, the following report of the activities of this committee.

When I was asked to take this chairmanship, it was my impression that there was very little need for such a committee in this state. On January 22, 1956, I attended a meeting at the Drake Hotel in Chicago of the state chairmen of the American Medical Education Foundation, and was amazed at the very grave need for a committee active and aggressive enough to raise a sum of money sufficiently large to prevent government intervention and financing of the 81 medical schools in this country.

During the past quarter century there has been a very rapid improvement in the teaching program of our medical schools. The cost has been increasing by leaps and bounds until, at the present time, it averages about $3,600.00 per year for each student being trained to become a good doctor. The reason for this increase in cost is that the schools have had to employ more full-time professors and spend much money in improving the teaching and research facilities in each department. Also, there has been the tremendous expense of equipment for radio and closed circuit television instruction, atomic medicine, as well as the formation of postgraduate departments with teams of faculty members travelling over the area served by the school and carrying valuable information as to the rapidly changing trends in medicine today. All of this service costs money, and, at the present time, our 81 medical schools are yearly experiencing a deficit of about ten million dollars.

Something had to be done about this situation. Therefore, five years ago industry and other lay organizations were approached, and they agreed to form the National Medical Education Fund, underwriting eight million dollars of this deficit, if the 200,000 doctors of the nation would agree to establish the American Medical Education Foundation and raise the remaining two million dollars. This would thereby eliminate government intervention.

The American Medical Association formerly made substantial contributions to this fund, but this year had to drastically reduce its donation. At the Chicago meeting numerous ways and means of raising the money were discussed. Up to the present time the only method of collection has been voluntary contributions. But, because of the fact that we have never reached our goal of two million dollars, various methods of raising the money were considered. Among them was the increase of dues to ten dollars per member. Help from the Woman's Auxiliary was welcomed. Some of the large industrial contributors are now becoming dissatisfied with our failure to support the schools that unselfishly gave us the knowledge to earn prestige in the community, the love and affection of our patients, and an ample income for ourselves. Some of them have stated that they will withdraw their contributions unless we give better support to our project.

Income from the Ford Foundation and the Commonwealth Fund are only making up a small portion of the deficit. No state supported medical school is eligible for any of the Ford money. Contrary to popular belief there is a real need for outside financial aid to state operated schools. They have to operate on a budget that is formulated once a year. There are many unforeseen departmental expenses that can not be financed without the assistance of some private agency or by federal aid. If adequately supported the American Medical Education Foundation and the National Medical Education Fund will respond and furnish generous assistance. None of this money can be used to replace any part of the expense already supplied by the budget of the state financed school.

This year contributions will still have to be on a voluntary basis, and it is hoped that the doctors of South Carolina will do their part and immediately come forth with the state quota of $13,000.00. All money contributed to this fund is income-tax-deductible. Each contributor can earmark his contribution to be applied to the medical school of his choice, if he so desires.

Your committee met for the first time this year on February 5 in Columbia and formulated some plans of our own for raising the money. At this meeting it was decided that we would only ask for voluntary

contributions this year and, at the same time, try to inform every doctor in the state of the very real need for this fund and his contribution to it. The central office of the State Medical Association in Florence has been requested to reserve a space for a booth at the state meeting to disseminate information and receive contributions. Dr. Keitt H. Smith has charge of the booth and has enlisted members of the Auxiliary to operate it for us.

The committee heartily endorses the efforts of the Woman's Auxiliary in their "Eighty-Dimes" campaign and sincerely appreciates their part in making Medical Education Week a successful project of this Association.

A recent movie film has been made for the American Medical Education Foundation explaining the methods used in training a good doctor, with some comments on the rising cost of a medical education. Copies of this film can be borrowed or obtained at a cost of about $25.00 each from the American Medical Education Foundation. They would be excellent for presentation to various lay organizations to give them some insight into what is required to become a doctor and the heavy cost of his education.

The committee respectfully presents this report for your approval with the added information that, up to now, South Carolina ranks among the very lowest of the states in its contributions. We recommend the approval of this report and its endorsement by the South Carolina Medical Association.

R. L. Crawford, M. D., Chairman

SALK VACCINE COMMITTEE

The President of the South Carolina Medical Association, Dr. O. B. Mayer, appointed three members to an Advisory Committee to represent the physicians and the Medical Association in advising the safety of the vaccine, on poliomyelitis vaccine distribution and administration.

The State Advisory Committee was set up under the direction of Dr. G. S. T. Peeples, Executive Director of the South Carolina State Board of Health.

Membership of the State Advisory Committee:

Dr. W. M. Hart, Florence, representing South Carolina Medical Association.

Dr. J. M. Albergotti, Orangeburg, representing South Carolina Medical Association.

Dr. William Weston, Jr., Columbia, representing South Carolina Medical Association.

Mr. Roscoe Langdon, Division Manager, McKesson and Robbins, Inc., Columbia, representing wholesale druggists.

Mr. John W. Davis, Columbia, representing retail druggists.

Mr. J. C. Holler, Director, Division of Instructions, State Department of Education, Columbia, representing Department of Education.

Mr. B. B. Leitzey, Florence, Assistant Superintendent Florence Schools, representing Parents and Teachers.

Dr. G. S. T. Peeples, State Health Officer and Liaison Officer, Columbia, representing Health Agencies.

Dr. T. W. Wyatt, Drug Inspector, State Board of Health, Columbia.

Dr. G. E. McDaniel, Director, Division of Disease Control and Epidemiologist, State Board of Health, Columbia.

Dr. Wyatt and Dr. McDaniel are consultants to the Committee.

Purpose of Committee:

1. Advise and assist the State Health Officers in carrying out the voluntary control program. "It will be their responsibility to coordinate the participation of the various professional, educational, voluntary agencies, and lay groups to insure the successful operation of the program." (Quoted from bulletin from S. C. State Board of Health)
2. Percentage distribution of vaccine with public funds and for commercial sale.
3. Keep public informed through education of press, radio, television, etc.
4. Review state plan and change as is advisable.
5. Program commenced as soon as vaccine available and safe.

Dr. Peeples had been appointed by Governor Timmerman as the liaison representative between the State Advisory Committee and the National Advisory Committee.

Dr. G. E. McDaniel acted as secretary. He always had much data and information.

The first meeting was called by Dr. Peeples on July 19, 1955. The measures and policy which was formulated by the National Advisory Board were presented by Dr. W. M. Hart from Dr. Julian P. Price, as the latter is a member of the Board.

Since there were no public funds available at this time it was moved and carried that the vaccine be distributed by the manufacturers through their regular channels—i. e. wholesale houses to the druggist, which was subject to the approval of the State Health Officer to insure complete and equitable distribution.

It was moved and unanimously passed that physicians administering the vaccine follow the recommendations of the National Advisory Committee:

Priority group be adhered to and they keep a record in their office of the name, age, sex, race, and address of the individual, vaccination dates, and site of vaccination, the manufacturer of the vaccine, and the lot number of the vaccine.

Motion was passed that the parents of the children cooperate in the voluntary control plan and present those only in the priority group.

Priority Groups:

First Priority: 5-9 years and pregnant women
Second Priority: 1-4 years
Third Priority: 10-19 years

The U. S. Government allotted 30 million dollars for the purchase of the Salk vaccine. Your committee advised that 20% be directed through the drug houses for purchase as some patients would prefer to pay,

while the remaining 80% be distributed through the County Health Officers.

Dosage: The present recommended dosage is two doses of one cc. each at 4 to 6 weeks interval, with the third injection, one cc., a minimum of seven months or longer. It is believed it will be effective as late as 10 to 12 months after the first injection.

Effectiveness: More than 20 states have been conducting special studies as to the benefits of the Salk vaccine. In New York State, exclusive of New York City, the attack rate in the vaccinated is 4.0 of paralytic polio as compared to a rate of 20.9 in unvaccinated children. "There have been three paralytic cases in South Carolina among the 118,000 children who received at least one dose of the vaccine. There have been 18 paralytic cases among the 140,000 children of the same 5-9 age group who did not get the vaccine." (From State Board of Health *Polio Vaccine Comments*, November 21, 1955)

Safety: Members of the U. S. Public Health Service's Technical Committee on Poliomyelitis on November 17, 1955, reported, "It is the opinion of the Committee that vaccine properly made by the present methods with Mahoney strain provides an entirely safe immunizing agent." The American Academy of Pediatrics through its Executive Board, after approval by its Committee on Control of Infectious Diseases, sanctioned the Salk Vaccine as now being safe on October 4, 1955.

The priority group as of February 15, 1956, was all under 15 years of age and pregnant women. The vaccine has been and is being distributed on a county population ratio. The larger populated counties have used much more in proportion than the smaller populated counties. There were 30,000 doses given over the state in November and December, while in January there were more than 50,000 doses. A total of 135,081 doses was given through January 31, 1956. Of this total, 66,034 were first doses, 60,720 were second doses, and 8,327 were third, or booster doses. This does not include vaccine given under the regular NFIP program of vaccinations of second grade school children. NFIP gave 22,795 doses under this program in 1955. The momentum is gaining and the people have become more confident. We trust the prevention of poliomyelitis will warrant their beliefs.

While confusion, turmoil, and misunderstanding existed at the outset, we now find tranquility, trust, confidence, and harmony with the Health Officers, druggists, parents, and doctors. Even the inocuees are not too unhappy as the reactions have been almost nil.

A complete statistical report on the vaccine that has been given thus far can be obtained from Dr. G. E. McDaniel, of the South Carolina State Board of Health.

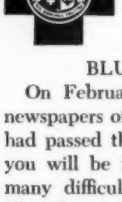
We extend thanks to the State Board of Health Director, Dr. G. S. T. Peeples, and to Dr. G. E. McDaniel for a job well done, and our appreciation to the remainder of the committee and to our President, Dr. O. B. Mayer, for the privilege of serving on this committee.

William Weston, Jr., M. D., Chairman
W. M. Hart, M. D.
J. M. Albergotti, M. D.

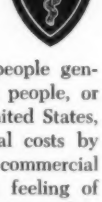
COMMITTEE ON VETERAN'S MEDICAL CARE

The Committee on Veteran's Medical Care feel that the situation, nationally, has not cleared sufficiently for them to make concrete recommendations to the Medical Association. They feel that this subject is very important, and for this reason, they recommend that the Committee be continued.

Respectfully submitted,
Lawrence P. Thackston, M. D., Chairman



BLUE CROSS . . . BLUE SHIELD



BLUE CROSS — BLUE SHIELD

On February 13, news was released through the newspapers of the Country that Blue Cross enrollment had passed the fifty million mark. In that connection you will be interested to know that in spite of our many difficulties, threats, and tribulations, our own Blue Cross plan had an enrollment of 213,410 on December 31, 1955.

These enrollment figures are of great significance to the medical profession. Only those doctors who have entered practice within the last ten years cannot remember the tragedy involved when the necessity for hospitalization arose in the years before 1940, and even later. Hospitalization was deferred as long as one dared. Many hospital bills were not and could not be paid. Serious illness frequently meant hospital admission on charity service, or mortgaged homes or depletion of savings.

It is very different now. Not only do people generally earn more money, but fifty million people, or one third of the people who live in the United States, have protected themselves against hospital costs by membership in Blue Cross. Others have commercial hospital insurance. These people have a feeling of security. They go to hospital early (often too early), and their hospital bills are paid. The patient, the hospital, and the doctor all are benefited.

The medical profession has had an important part in the tremendous voluntary Blue Cross movement which began twenty-five years ago. Doctors have served on national and local boards and committees. They have aided in the planning and operation of Blue Cross plans. They have recommended Blue Cross membership to their patients. They have joined Blue Cross themselves.

Blue Cross is going through a period of trial. Its

difficulties stem from increasing costs of hospital care with necessarily increased membership costs. Increased hospital costs are a part of the general increase in living costs, but they are more than that. Comprehensive studies have shown that much of the increase in the costs of medical care is due to increased and abnormal and unnecessary utilization.

That term includes and refers to hospital admissions for minor illnesses, too-long hospital stay for convenience of the patient or the patient's family, unnecessary and repetitious x-ray and other laboratory examinations, too-long-continued administration of expensive drugs.

Because over-utilization is the basis for many of Blue Cross's difficulties, and since the medical profession is intimately tied in with such utilization, the responsibility rests largely on the shoulders of the profession in determining the fate of Blue Cross as a social-economic institution. We as doctors can wreck it—or we, through education, information, advice, and, if necessary, refusal to be a party to fraudulent or coercive practices in connection with hospital care, can help to save and to render ever stronger this humanitarian institution which has under its protective care more than fifty million of our people.

J. Decherd Guess, M. D.
Medical Director

Exhibitors Pages

WM. P. POYTHRESS & CO.

The mild sedative, SOLFOTON, and the effective antiasthmatic, MUDRANE, will be featured at the Poythress exhibit. Information and professional samples on all Poythress specialties will be available to physicians attending the meeting.

A. H. ROBINS COMPANY, INC.
Richmond, Virginia

The Robins exhibit features the Donnatal "family" of antispasmodics, including the original tablets, capsules, the versatile elixir and the new Donnatal Extentabs, which provide all-day or all-night effects on single dosage; while the formula combined with B complex and indicated in the medical management of chronic fatigue states is available as Donnatal Plus. Also shown are Entozyme, Pabalate, Pabalate-Sodium Free and the new Pabalate-HC (Pabalate with Hydrocortisone).

VANPELT & BROWN, INCORPORATED
Richmond, Virginia

VanPelt and Brown extend a cordial invitation to visit their exhibit where representatives will be happy to answer questions and supply clinical samples of their products.

SEALY OF THE CAROLINAS

We expect to show the nationally-advertised Sealy Posturepedic innerspring and Sealy Posturepedic foam rubber mattresses over their matching 308 coil posture-lok foundations, and we also will probably show a 28 x 52" crib size Baby Posturepedic innerspring mattress.

This merchandise is advertised in journals of the American Medical Association. A special medical discount pricing for members of the medical profession, for their own use and for that of members of their families, has been in effect for many years. The Posturepedic innerspring mattress is the original of the currently popular firm mattresses. The Posturepedic foam rubber mattress, over its matching posture-lok foundation, has been judged by a national testing company to be 50% firmer and with 75% less side sway (shimmy) than any other nationally-advertised product.

WINTHROP LABORATORIES

LOTUSATE: 2 grains purple Caplets, highly effective, well tolerated hypnotic providing 6 to 8 hours refreshing sleep at night. Also available in sedative doses, 1/2 grain yellow and 3/4 grain salmon colored caplets.

TELEPAQUE: highly effective and well tolerated oral cholecystopaque medium. Gives denser, clear cut pictures of the gallbladder and, in a substantial number of cases, also permits visualization of the biliary ducts.

THE S. E. MASSENGILL COMPANY

The S. E. Massengill Company will exhibit:

SALCORT, a judicious combination of salicylates and cortisone for the treatment of arthritic and rheumatoid affections.

HOMAGENETS, the homogenized vitamins. A liquid suspension in a solid form, Homagenets may be chewed, swallowed or allowed to dissolve on the tongue. Homogenized vitamins are better absorbed, better utilized and large vitamin excesses are unnecessary.

PFIZER LABORATORIES

The Pfizer exhibit again will be in the spotlight with its new and original concept of anti-stress, anti-infective therapy—TETRACYN S.F. and TERRAMYCIN S.F. (Stress Fortified). Also, the complete line of Pfizer antibiotics and STERAJECT as well as the new specialties, BONAMINE, TYZINE, TOCLASE and the complete line of steriod hormones in-

cluding CORTRIL and the latest corticosteriod STERANE (brand of prednisolone).

MEAD JOHNSON & COMPANY

The new Deca vitamin family for the vital first decade of life will be exhibited by Mead Johnson & Company in booth No. 1. Included in the new Deca family of vitamin specialties are: Deca-Vi-Sol, for dropper dosage, a fruit flavored solution for infants and toddlers; Deca-Mulcin, for teaspoon dosage, a pleasantly-flavored liquid for preschool children of 2 to 6 years; and Deca-Vi-Caps, small, easily-swallowed capsules, for school-agers of 6 to 10 years. All three Deca vitamin specialties supply 10 nutritionally significant vitamins including A, C, and D, plus 7 important B vitamins.

PARKE, DAVIS & COMPANY

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products. Important specialties, such as Penicillin S-R, Benadryl, Ambodryl, Dilantin Suspension, vitamins, Oxycel, Milontin, Amphedase, Chloromycetin, Thrombin Topical, etc., will be featured. You are cordially invited to visit our exhibit.

CAMBRIDGE PHARMACEUTICALS

Cambridge Pharmaceuticals, Inc.—The Company owned and operated in South Carolina by South Carolinians, invites your inspection of our booth No. 30, featuring GYNBEN—a new effective treatment of trichomonas and monilia infection.

DICTAPHONE

Dictaphone Corporation will be present in full regalia. We will display the fabulous Time-Master Dictating and Transcribing Machines, featuring the Dictabelt Record that has enabled us to enjoy over 50% of all the dictating machine business in the United States.

We will also show the President Model Remote Control Dictating Machine and the amazing Dictaphone Telecord System. The incomparable Time-Master Power Control will also be featured and we feel confident that the medical men who attend will be amazed when they see and hear Dictaphone Time-Master equipment in action.

For dictating case histories, progress notes and all medical dictation, many doctors throughout the great state of South Carolina have found it possible with the aid of a Time-Master "Thought-Trap" to increase their capacity to get things done.

PET MILK COMPANY

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" evaporated milk for infant feeding and INSTANT "Pet" nonfat dry milk for special diets. A minature "Pet" evaporated milk can will be given to all visitors.

A. S. ALOE COMPANY

A cordial welcome is extended to the members of the South Carolina Medical Association to visit the A. S. Aloe Company exhibit. A unique array of surgical, physio-therapy, x-ray and laboratory equipment will be displayed.

LEDERLE LABORATORIES

You are cordially invited to visit the Lederle booth where our medical representatives will be in attendance to provide the latest information and literature available on our line.

Featured also will be Achromycin, Incremin, Diamox, vitamins, Pathilon, Varidase and many other of our dependable quality products.

CIBA

The CIBA exhibit features SERPASIL—the original, pure crystalline alkaloid of Rauwolfia. SERPASIL has been found extremely useful as a tranquilizer in treating patients whose adjustment to life is complicated by anxiety, irritability and various psychosis. Patients feel calm, yet in properly adjusted doses retain their drive and energy. It is highly effective in many conditions where barbiturates have been commonly prescribed.

U. S. VITAMIN CORPORATION

Exhibit features an entirely new, safe vasodilator drug with three unique pharmacologic actions: (1) selectively dilates blood vessels of skeletal muscle. (2) mobilizes depot blood. (3) increases cardiac output. Thus, ARLIDIN (Nylidrin HC1. NNR) is indicated in treating intermittent claudication and a wide range of functional and obliterative peripheral vascular disorders.

Professional samples and literature distributed also on our complete line of nutritional and pharmaceutical specialties.

THE LANIER COMPANY

The Lanier Company, world's largest distributor of dictating equipment, will exhibit their complete line of Audograph individual dictating machines and PhonAudograph central dictation systems.

Sales representatives fully conversant with these systems and their applications will be available to discuss soundwriting applications with the convention delegates.

CHARLES C. HASKELL & CO., INC.
Richmond, Virginia

The Haskell Company's ethical prescription specialties—BELBARB (antispasmodic, sedative), HASAMAL (analgesic), SILMIDATE-M (analgesic, muscle relaxant), QUERSERPIN (tranquilizer, antihypertensive)—will be exhibited. Our representatives will be present to welcome physicians and discuss any questions they might have.

COLUMBIA BRACE SHOP

Our exhibit will consist of a display of orthopedic shoes and braces.

ELI LILLY AND COMPANY

You are cordially invited to visit the Lilly exhibit located in space number 34. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

WACHTEL'S PHYSICIAN SUPPLY CO.

It has always been a pleasure to exhibit at the meetings of the S. C. Medical Association, and we plan to be present again this year.

Our exhibit will feature the Burdick electrocardiograph and Ultrasonic Unit as well as the Morris Debrillator-Pacemaker for use in ventricular fibrillation, external heart control, and cardiac standstill.

Our Mr. Jack Wilkins will be in attendance to demonstrate these machines, and we cordially invite all physicians and others interested to visit our booth.

DOHO CHEMICAL CORPORATION

DOHO CHEMICAL CORPORATION is pleased to exhibit:

AURALGAN, the ear medication for the relief of pain, otitis media and removal of cerumen.

NEW OTOSMOSAN, the effective, non-toxic ear medication which is fungicidal and bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears.

RHINALGAN, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged.

Mallon Chemical Corporation, Subsidiary of the Doho Chemical Corporation, is also featuring:

RECTALGAN, the liquid topical anesthesia, also for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing.

DERMOPLAST, in an aerosol freon propellent spray for fast relief of surface pain, itching, burns and abrasions. Also Obs. & Gyn. use.

WESTWOOD PHARMACEUTICALS

Lowila Cake, the only completely soap-free skin cleanser, in cake form, available to your allergic or dermatitic patients whenever soap is contraindicated. It degerms the skin as it cleanses without added antiseptics.

Gentia-Jel, the only effective gentian violet jelly you can prescribe for self treatment by the patient at home. Eliminates messy office treatments which often stain your furniture and clothing.

Spradern, a modified form of standard antipruritic lotion (with phenol and menthol) listed in the Dermatology Formulary of the Skin and Cancer Unit, New York Postgraduate Hospital. Packaged in aerosol spray containers, Spradern increases the dermatologic and esthetic value of menthol and phenol lotions.

TABLEROCK LABORATORIES, INC.

TABLEROCK proudly presents SENAZOL, a unique combination of both sex hormones with lipotropes, essential vitamins and necessary minerals PLUS METRAZOL, the proven safe cerebral stimulant. SENAZOL provides a multitude of factors in one dosage form for the GERIATRIC PATIENT'S multipilcity of symptoms. PRESCRIBE SENAZOL FOR EVERY GERIATRIC PATIENT . . . EVERY DAY.

W. T. HINNANT ARTIFICIAL LIMB CO.

The W. T. Hinnant Artificial Limb Company has been manufacturing prosthetic and orthopedic appliances for the past 20 years in the south, having our factory in Charlotte and a branch office with complete service facilities in Columbia, South Carolina. At our exhibit this year, we will have a complete line of both upper and lower extremity prostheses, and orthopedic appliances as well.

Mr. John Hinnant and Mr. John Hammond will be there in order to explain any and all phases of the prostheses that we exhibit.

THE WILLIAM A. WEBSTER CO.

We shall exhibit and sample our line of Supprettes only. This is a new development in suppository medication using our EXCLUSIVE water-soluble NEOCERA BASE. No refrigeration is required as the Supprettes are stable at elevated temperatures. Breakdown is by contact with rectal and vaginal fluids. No oily or fatty barriers are present to interfere with complete utilization of the medicaments in the Neocera Base. For the first time in suppository history the rectal dose is the same as the oral dose and the systemic effects are the same.

DRUG SPECIALTIES, INC.

The exhibit will feature Nicozol, a cerebral tonic and stimulant which has been reported on in several medical journals.

It will also feature Pentergot inserts for the treatment of Migraine, which also has been reported on in journal articles.

WARNER-CHILCOTT

A visit to the Warner-Chilcott booth will pay dividends, especially in the interests of your cardiovascular patients. The company is featuring two "clinically tested and proven agents": one to help you prevent attacks of angina pectoris; the other, the most potent drug currently available for reduction of blood pressure in hypertensive patients.

MILEX

Long Island City 4, New York

MILEX, booth 12, is proud to present its new CANCER DETECTION PROGRAM to the Members of the South Carolina Medical Association. This new program makes it possible for EVERY FAMILY PHYSICIAN to become the first line of defense in the

early detection of uterine or cervical cancer.

TRICHO-SAN for the common vaginal infections and the CRESCENT DIAPHRAGM will also be featured.

ABBOTT LABORATORIES

A new non-barbiturate hypnotic, PLACIDYL°, (Ethchlorvynol, Abbott) will be among the new products exhibited by Abbott Laboratories. Also shown will be NEMBU-SERPIN° Filmtabs(R), (Nembutal(R) and Reserpine, Abbott), a new sedative, tranquilizer and antihypertensive; DESBUTAL(R), new mood-improvement drug; and ERYTHROCIN(R) Filmtabs (Erythromycin, Abbott), an antibiotic providing specific action against coccic infections and minimal risk of side effects. Abbott will also exhibit IBEROL(R) Filmtabs containing intrinsic factor concentrate, B_{12}, iron and other vitamins; OPTILETS(R) high-potency therapeutic multi-vitamins; VI-DAYLIN(R), a homogenized mixture of seven vitamins, SELSUN(R), for control of seborrheic dermatitis; PENTOTHAL(R) SODIUM, the intravenous anesthetic agent, and Abbott's complete line of intravenous solutions and equipment.

°Trade Mark

G. D. SEARLE & CO.
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Mictine, the new safe, non-mercurial oral diuretic; Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine and Pro-Banthine, the standards in anticholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

The following will also exhibit.

American Bedding Company
American Surgical Supply Company
Thomas A. Edison, Inc.
General Electric Company
Hart Drug Corporation
Mayrand, Inc.
Powers and Anderson of South Carolina, Inc.
Sandoz Pharmaceuticals
Winchester Surgical Supply Company

POSTGRADUATE INSTRUCTIONAL AND AUDIO-VISUAL PROGRAM
MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA
CAROLINA HOTEL, PINEHURST, N. C.

SUNDAY, April 29, 1956

Surgical Repair of Complete Uterine Prolapse—C. H. Mauzy, M. D., Discussor.

A Normal Labor and Delivery (sound-color) by John Ashe, Jr., M. D.

Clinical Applications of Physiology of the Gastro-Intestinal Tract—W. Walton Kitchin, M. D., Chairman.

Surgical Physiology of the Stomach and Duodenum —Lawrence Owsley, M. D.

Surgical Physiology of the Small and Large Bowel —W. W. Kitchin, M. D.

Surgical Physiology of the Liver and Bilary Tract —Howard Starling, M. D.

Surgical Physiology of the Pancreas—James Davis, M. D.

MONDAY, April 30, 1956

Accessible Cancer of Cervix and Uterus—E. C. Garber, Jr., M. D., Discussor.

Pudenal Nerve Block with Intracaine and Demerol —L. M. Schadel, Jr.

Diagnostic and Treatment Problems Associated with Fibromyomata Uteri— R. T. Parker, M. D.

GENITO-URINARY DISEASES
Amos N. Johnson, M. D., Chairman, Garland, N. C.

Diagnosis and Diagnostic Procedures of Prostatism —F. K. Garvey, M. D.

Diagnosis of Carcinoma of the Vagina and Cervix —Robert N. Creadick, M. D.

AUDIO-VISUAL PROGRAM

Anatomy of the Female Perineum—Joseph Markee, Ph. D.

Wertheim's Operation—Jesse Caldwell, M. D., Discussor.

Complete Hysterectomy—Leonard Palumbo, Jr., M. D., Discussor.

POSTGRADUATE INSTRUCTIONAL COURSE IN TRAUMA
Everett I. Bugg, Jr., M. D., Chairman

Care of the Patient with Acute Brain Injury—Eben Alexander, Jr., M. D.

Care of the Patient with Fracture of the Pelvis—Ira Rapp, M. D.

Urological Complications Associated with Pelvis Fractures—Jack Hughes, M. D.

The Use of Whole Blood and Fluid in the Acutely Injured—Ivan Brown, M. D.

Clinical Therapeutic and Pathologic Conference

TO BE PRESENTED FOR DISCUSSION AT THE CONVENTION

Present Illness: A 63-year old white male was admitted through the Emergency Room on November 12, 1954 at 7:40 P. M. shortly after an automobile collision. He was the driver of his car which was struck from the left by a car coming through a stop sign. He was unconscious in the emergency room but responded somewhat in the x-ray department. There was a transient right hemiplegia. A laceration of the scalp in the occipital region to the right of the midline was sutured. There was a compound comminuted fracture of the right tibia and fibula in good position. There were numerous fractures of the left ribs with pneumohemothorax and some paradoxical respiration.

When he was admitted to the ward the blood pressure was 80/50 and blood transfusion was started. Because of severe respiratory distress, thoracentesis was done yielding 300 ml. of blood and unlimited amounts of air. A thoracotomy tube was inserted in the second left interspace anteriorly with water-sealed drainage to relieve the tension pneumothorax. Intercostal nerve blocks were performed at the same time. The blood pressure remained at shock levels until 1:45 A. M. when it rose to 100/86 and soon became stabilized at about 130/80 but tended to drop as low as 110/70 for several days. Five ml. of bloody urine was obtained by catheter at 1 A. M. and a Foley catheter was inserted. Urological consultation was secured and cystograms showed a normal bladder without evidence of extravasation. The urinary output was 270 ml. during the first night. On successive 24 hour periods there was 1840, 780, 2130, 2300 and 1950 ml. of clear urine.

There continued to be respiratory distress and difficulty in keeping a patent airway so that on November 15, 3 days after the accident, a tracheostomy tube was inserted under local anesthesia. Because of deepening coma, bilateral trephines were made on November 18 and a moderate amount of subdural fluid evacuated on the right without improvement of his condition. On the evening of November 17, the blood pressure was found to be 90/65 but averaged about 115/70 for the next day. On November 19, the systolic pressure remained about 90/50 until 1:30 P. M. when it became unobtainable and death occurred one hour later.

Laboratory examinations showed 4 plus sugar in the urine on admission and the blood sugar was 582. It then became known that the patient was a mild diabetic taking 15 units of insulin per day. The blood sugar was down to 190 on the evening of November 14 under insulin coverage but control remained difficult. Blood chemistry on November 18 showed chlorides 480 mgm., sodium 324 mgm. and potassium 22.6 mgm. The CO^2 combining power was 59 volumes per cent. The spinal fluid on November 15 showed an opening pressure of 180 mm. of fluid, no cells and protein 28 mgm.

The patient's course during the final several days was essentially that of continued dyspnea and pulmonary congestion, deepening coma with right hemiplegia and terminal hypotension. The rectal temperature varied between 101 and 103 degrees.

PLANS FOR PUBLIC HEALTH MEETING ANNOUNCED

The South Carolina Public Health Association meeting for this year promises to be one of the very best in the history of the Association," according to Mrs. Blanche R. Speed of Greenville, president.

The program committee, Miss Betty Ficquett, chairman, announces that the speakers to appear on the program are among the most outstanding in public health and other fields.

Dr. George A. Bunch, chairman of the arrangements committee, stated that the entire meeting will be held at the Francis Marion Hotel in Charleston April 19 to 21. General registration will be from 8:30 a. m. until 2:00 p. m. April 19. The first general session will begin at 2:00 p. m.

DR. O. B. MAYER
President

Officers

DR. WILLIAM WYMAN KING
Vice-President

HOWARD STOKES, M. D.—*Treasurer*

ROBERT WILSON, M. D.—*Secretary*

DR. WILLIAM HUTSON PRIOLEAU
President-Elect

PRESIDENT'S PAGE

The Annual Meeting is only a month away. All the major arrangements have been completed. The Scientific Committee, composed of Dr. Henry W. Mayo, Jr., Chairman, Dr. J. Sam Garrison, and Dr. W. M. Bryan, Jr., has worked diligently and has arranged a fine program, primarily around panel discussions of interesting subjects. Several unusual scientific exhibits and commercial exhibits will add further attraction.

We have been very fortunate in securing Dr. George F. Lull, Secretary of the AMA to be banquet speaker on Thursday evening. This should be an outstanding event. Plans are in the making for the other evenings entertainment by Mr. Meadors.

I look forward to seeing you and your wife at Myrtle Beach, May 15-17. Reservations should be made early.

It has been a privilege and honor to be your President. As opportunity occurred, I visited Medical Societies over the State, and was thrilled to find the scientific interest and feel the cooperation and unity that existed.

A great service was rendered the people of South Carolina by the repeal of the Naturopathic Act. The determination and endless effort of the members was most commendable.

May I take this occasion to thank each of you for your cooperation and interest. The South Carolina Medical Association is destined to go forward. I extend every good wish to the members of the Association and the new officers.

Sincerely,

O. B. MAYER

Editorials

CONVENTION CALL

What makes a convention click? attendance? business? scientific program? social events? relaxation? old friends? new friends? beautiful beach weather? For our 1956 convention at Myrtle Beach we can guarantee all except the last, and we hope heartily for that.

Of recent years the annual conventions have run smoothly and efficiently, with much business transacted and much good information spread. Social events have been pleasant and a good time has been had by all. Most of the smoothness of performance has been due to the efficient efforts of Jack Meadors, assisted ably by the financial and other contributions of the exhibitors.

This promises to be the biggest and best of all of our one hundred and eight annual meetings. Come for your share of knowledge, fun, and work.

FALLACY OF FALLOT

There is no criticism of a man who achieves eponymic fame for a "new" account of a disease or a syndrome, when he or his promoters are unaware that his contribution has been made already by another.

In this period of rapid development of surgery of the heart, the tetralogy of Fallot has become a fairly well known condition. Described in 1888 by A. Fallot in *Marseille Médical* it has established a firm claim on the name now generally accepted. Yet it appears that the anatomical abnormality so designated was described many years before the time of Fallot by Edward Sandifort, a Dutch physician who wrote "*De rarissimo cordis vitio*" (1777) which was the same pathological condition which had the name of Fallot attached to it in later years.

There are many medical people who object to the use of eponyms in medicine. These name-plates would seem to have a certain value, but whatever their desirability may be, if they are to be used, they should surely have the proper element of accuracy and veracity.

As for this journal, it will make a probably fruitless effort to replace Fallot with Sandifort whenever the editorial occasion arises, so that credit may be given where it belongs, but without prejudice to the acuteness of Fallot's observations.

Bull. Hist. Med.—20 (1946): 539.

NATUROPATHIC LAW REPEALED

A long hard Legislative fight by the South Carolina Medical Association was concluded successfully on February 21, 1956, when the Senate gave third reading and final passage to the Bill to repeal the Naturopathic Licensing Law in South Carolina. The end came suddenly after approximately two hours of debate, which at times had all the earmarks of the beginning of an extended and determined filibuster by our opponents. Several amendments were proposed, all of which were defeated by a wider margin than any of the votes at earlier stages. Then Senator Lewis Wallace of York took the floor, followed by Senator Leppard of Chesterfield and Ellison of Lexington. Motions to adjourn were made from time to time by one or the other of these, without success, and after the resounding chorus of "No's" which greeted Senator Ellison's final motion for adjournment while he had the floor, the opposition threw in the sponge. The question then being on final passage of the Bill, it was put, without a roll call. There were many "ayes" and actually not a "no" was heard.

The whole effort to accomplish passage of the measure had taken a little over a year. The Bill was introduced in March, 1955, passed the House of Representatives, received a first reading in the Senate, action by the Senate Committee on Medical Affairs and ran into a filibuster on the floor of the Senate, all in the 1955 session. It was then deferred, in the last few days of the session, under special order for a

vote not later than twelve o'clock noon, January 25, 1956. That date was postponed two weeks because of conflict with an election of an Associate Justice of the Supreme Court, fixed for the same time; but the postponement was not made without again fixing the vote for a definite time, February 8. The Bill received second reading in the Senate that day after vigorous and determined effort on the part of the opposition to further delay, amend or recommit the Bill. About seven motions were defeated, one after the other, some of them by rather narrow margins. There remained only the action on Febuary 21 to finish the job. Senator James Hugh McFaddin of Clarendon, actively leading the fight for the Bill throughout, spoke vigorously in favor of its passage. It was the first time the proponents had spoken at length in debate, because the strategy of the situation previously had not required it. Along with Mr. McFaddin, Senators L. Marion Gressette of Calhoun, W. Ed Myrick of Allendale, Allen Legare of Charleston, and Lawrence Hester of McCormick were at all times active on behalf of the Bill; and Senators Rembert Dennis of Berkeley, H. B. Richardson of Sumter, Grant of Chester, Lawton of Hampton, Long of Union, Mars of Abbeville, Michaux of Williamsburg, Morrah of Greenville, Morrison of Georgetown, Spigner of Richland, Stevens of Horry, Paul Wallace of Marlboro, West of Kershaw, and Marshall Williams of Orangeburg were consistent and faithful in their support.

We had been confident of passage of the Bill when it came to the final vote. There was always the danger, however, of further filibuster and of the adoption of some amendment. Virtually all of the activity of the opponents this year was directed to an effort to have some amendment adopted which would serve to draw the teeth from the provisions for repeal. It was this activity which gave rise to rumors at one time that a compromise might be reached. Actually there was no consideration of compromise by our leaders in the Senate or the officials of the Association. An apparently harmless amendment proposed on the final day, which would have postponed the effective date of the measure to January 1, 1957, if adopted, would have required the Bill to go back to the House; and this might have been exceedingly dangerous in view of the plans for a short session. It was defeated, as were all proposed amendments, and the Bill was passed finally just as it came from the House last year. The only amendment adopted in that body was that, to which we agreed, providing for examination by the Board of Medical Examiners of one or two individuals who may be able to qualify as applicants under its terms.

The Act was signed by Governor Timmerman and became effective as law on February 27. Threats from several naturopaths of legal action to test its validity were immediately reported in the newspapers. On March 13, a Petition was filed with the Supreme Court and a temporary restraining order was signed by Chief Justice Stukes, enjoining the Attorney General and other law enforcement officials from taking any action against the naturopaths under the law, pending a decision by the Court. The Complaint in the action has not been filed as this is written, but obviously the attack will be on constitutional grounds.

Similar steps were taken in Tennessee when the repealing statute was passed in that State. The legislative action was upheld by the Supreme Court there, and we are confident that the result will be the same in South Carolina.

It is of interest to note, also, that a similar Act was adopted in Georgia in January, outlawing the practice of Naturopathy in that State.

M. L. M.

MEDICAL EDUCATION WEEK

In the first nationwide observance of Medical Education Week, April 22-28, the county medical societies have joined with the medical colleges and other allied medical and health organizations in this area to present a community-wide program of information.

Specifically, Medical Education Week has three functions: (1) to focus national attention on the significance of medical education and the problems of medical schools; (2) to

bring home to the public the contributions of medical science to American life, and (3) to foster public interest, through wide public knowledge, in the private support of medical education.

These three goals can be achieved through the use of all media of communication: newspaper coverage and editorials, radio and TV interviews, medical school open houses, and presentations to civic and fraternal groups. These goals will be achieved, however, only if our entire membership comes forth to participate. Medical Education Week is a mass education campaign requiring the manpower of our entire society.

These are the facts to be dramatized: the nation's 81 schools are enrolling and graduating more physicians and providing greater research facilities than at any time in history. Translating these achievements in terms of community understanding, they mean the United States, largely because of its excellent medical schools, will continue to be the healthiest nation in the world. A healthier people, protected by expert medical care, attains maximum industrial production, peak efficiency in the armed forces, and increases earning power.

Medical Education Week will stress the *positive* picture of the medical schools' selfless contributions to the American people. In turn, it will overcome the myths and false impressions identifying the schools as the "closed shops" of the medical profession. With the cultivation of an appreciative public, we believe the financial plight of medical education will be eased.

The AMA, the Association of American Medical Colleges, the National Fund, and the American Medical Education Foundation, national sponsors of the Week, are providing the national promotion through syndicated news features, magazine articles, network radio and TV programs; it is up to our society to come out and "sell" the observance locally.

HOW ARE YOUR PUBLIC FRIENDS AND RELATIONS?

This is what they think about us—

From the *Seneca Journal* Feb. 8, 1956

"Call The Doctor, But Not After Midnight

It has been reported that in many cases doctors are now making an extra charge if called out at night past the hour of 12 midnight.

Without disputing the fact that a regular diet of such calls is an untasty matter, the point remains — when did mercy assume a time limit?

Are we to tell our children: "Don't get sick after midnight, darlings, it costs an extra two bucks?" Is there any method to keep an appendix from being troublesome between the hours of midnight and 8 a. m., or to delay any of a batch of ailments that hit suddenly during the wee small hours?

We have come a long ways from the days of the old medical doctor who swore his duty to man-kind, come hell or high-water.

No wonder there's so much agitation in many circles for so-called "socialized medicine." With this "extra" after midnight, and other fancy (and especially high-priced) stuff, the modern medicine-man is bringing it on himself!"

The Farmer from Quietude, O. L. Warr, wrote the following paragraph in his column in *The News and Courier,* February 5, 1956:

"Not so many moons ago I sat in a medical clinic, located out in the anonymous blue yonder and a right good piece from here, waiting my turn to get a pillbox refilled for another person. Waiting also was a patient who had spent a few days and nights at the clinic, which was equipped with facilities for that sort of treatment.

The patient felt that he was well enough to go home. His family had come to carry him there. He was dressed and ready to go.

Only the permission, or perhaps I should say the approval, of his doctor was awaited. That worthy gentleman was repeatedly interrupted during his careful examination, not of the physical condition of the patient who sat quietly

in a corner, but of the provisions of the patient's insurance policy, spread open upon his desk.

At last he seemed satisfied with what his scrutiny disclosed. He folded the policy and crammed it into a drawer piled with others.

'I think you'd better stay here two more days,' he said, and in his voice was a tone of professional finality as he turned his attention to the ills and the policies of other waiting patients."

CORRESPONDENCE

Dear Doctor:

Each year the operating deficit of our eighty medical schools approximates $10,000,000, and unless this deficit can be eliminated, American Medicine, as you and I have known it, will be a thing of the past.

To meet the need of our medical schools for additional financial support, two committees were created. The American Medical Education Foundation, or A.M.E.F., was established and sponsored by the American Medical Association to raise funds from the medical profession. The National Fund for Medical Education was organized to seek contributions from business, industry, and other segments of our society.

Industry, we are assured, can raise $8,000,000 and has expressed a willingness to do so provided the medical profession can raise the remaining $2,000,000. Since there are over 200,000 physicians in practice in the United States, a contribution of only $10.00 per physician would insure the necessary two million dollars.

The contributions from doctors in South Carolina have been exceedingly small. The total in 1954 was $4,546.00 from 152 physicians. This means that only approximately 11% of the members of the Association made a contribution to the Education Foundation in 1954, and the total sum contributed amounted to an average of about $3.30 per member.

South Carolina is not alone in this respect. In view of the poor record at least one large and prominent corporation voted last year to cancel its annual contribution of $50,000, feeling that until the doctors could support their own educational institutions more adequately, they could hardly expect Industry to do so.

Please mail your check as promptly as possible to the undersigned and the amount will be credited to your medical school unless you indicate otherwise.

Sincerely yours,

R. L. Crawford, M.D., Chairman
State A. M. E. F. Committee

SOCIETY MEETINGS

SPARTANBURG COUNTY MEDICAL SOCIETY

At the regular Spartanburg County Medical Society meeting on February 28, Dr. Ivan Brown, Associate Professor of Surgery at Duke University, was the speaker. His talk illustrated with slides was on Transfusions and Blood.

The dangers of transfusions were pointed out and cases to illustrate were shown. As long as human beings are laboratory technicians, errors, even though occasional, are bound to occur. Patients with the same or similar names may receive the wrong blood. An interpretation of the Rh factor may be erroneous the first time. Even though major factors may be correct—minor ones may be overlooked. A patient who receives the wrong blood will usually begin to ooze blood from all denuded surfaces. This has been proved to be caused by an almost immediate diminution in the platelet as well as the white cell count. The cause of death is usually lower nephron nephritis and every effort to tide the patient over until the lining of the nephrons is restored must be made. Immediate steps are trained toward restoration of renal flow and correction of shock. No vasopressor drugs should be given because all of them function by narrowing the lumen of the arterioles and that is what has already happened in the kidneys. Intravenous glucose 10%-15% in water should be given fairly rapidly for 2-3 hours—if no result it should be stopped.

Magnesium sulphate should be given cautiously. When and if it is obvious that the kidneys have shut down completely:

Water intake should be limited to from 850 to 1200 ml. in 24 hours.

High protein diet should be allowed.

High caloric emulsion diet should be given.

Rice (not really necessary, but Dr. Brown said nearly all diets originating at Duke have rice in them).

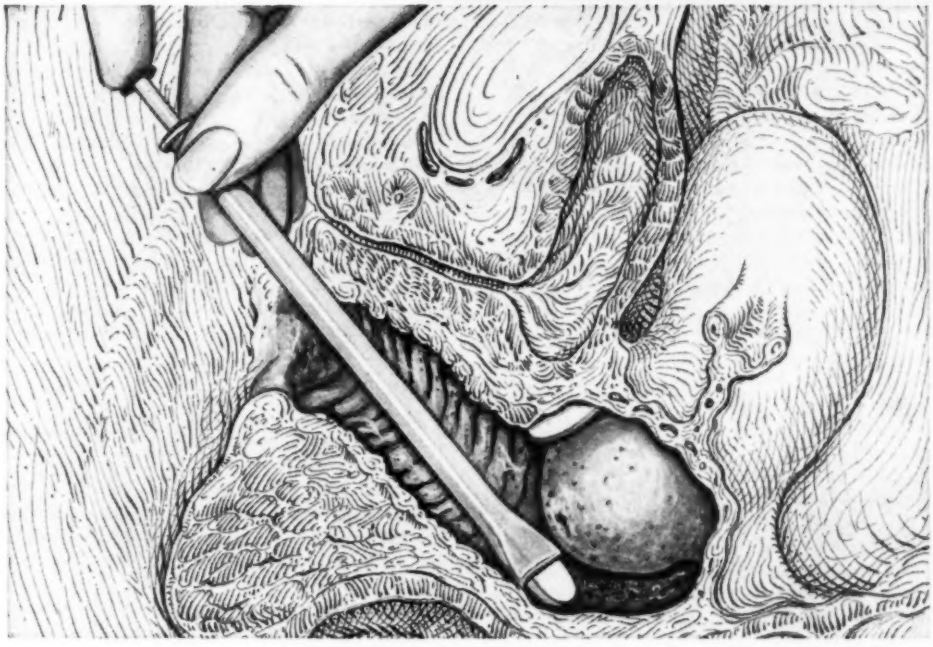
200 Gm. Peanut oil 50 Gm. Dextrose	Volume 1,000 Ml. 2,100 calories	Give through small stomach tube
20 Gm. Tween 80 650 Ml. Water	Low output of protein, but high in calories.	

Testosterone
Correct severe acidosis
Intestinal or intermittent peritoneal irrigation.
Replace electrolytes and water if diuresis occurs.

This condition—anuria from wrong blood—is reversible if the patient can be sustained long enough. One patient was anuric 30 days and was maintained on the regime outlined above.

Platelets can now be separated in a fractionator from the red and white cells. They are the best presently known means of restoring to normal the

FLORAQUIN® VAGINITIS REGIMEN



New Intravaginal Applicator for Improved Treatment of Vaginitis

The restorative treatment of vaginitis with Floraquin is now further improved by a new aid to tablet insertion. Faulty insertion is no longer a failure factor in therapy.

The new Floraquin applicator is designed for simplified insertion of Floraquin tablets by the patient. This plunger device, made of smooth unbreakable plastic, places the Floraquin tablets in the fornices and thus assures coating of the entire vaginal mucosa as the tablets disintegrate. The patient inserts two Floraquin tablets with the applicator in the morning and also two tablets at night, with treatment being continued through at least two menstrual periods. During menstruation it is desirable to increase medication to eight tablets daily to combat the alkalinity of the menstrual flow.

Warm acid douches (2 ounces of 5 per cent acetic acid or white vinegar to 2 quarts of warm water) may be taken as often as desired for hygienic purposes.

Floraquin contains Diodoquin® (diiodohydroxyquinoline, U.S.P.), the safe and effective protozoacide and fungicide. Lactose, anhydrous dextrose and boric acid are included to help restore the normal acid pH of the vaginal secretions. Such an acid vaginal medium then encourages the growth of normal flora and makes the environment unfavorable for pathogens.

A Floraquin applicator is supplied with each box of 50 (a new package size) Floraquin tablets. G. D. Searle & Co., Research in the Service of Medicine.

New Floraquin Applicator and commercial package of 50 Floraquin tablets available on request to . . .

SEARLE

P. O. Box 5110, B
Chicago 80, Illinois

generalized oozing of a person who has received the wrong blood.

The new separator works much like a cream separator but it is many times more complex. Blood is received by gravity into a cooling machine through plastic tubes—all steel surfaces are coated with silicone to minimize destruction of blood cells of all kinds. It is cooled rapidly because elements of blood especially lipoproteins are altered immediately upon leaving the body and cooling lessens considerably this alteration. The blood is centrifuged away from air at very high speed and the different cells—white, red, and platelets—flow into separate plastic bags.

Dr. Brown showed a picture of a small simple plastic bag with a coil of plastic tubing in it which can oxyenate to the point of saturation a pint of blood in one and one-half minutes. With this simple device, a patient has been kept alive for two and a half hours while the heart was opened and repaired.

Dr. Brown stated that within a matter of only a few years he felt certain that blood could be stored indefinitely by a sort of suspended animation. Drawn into a bottle containing salt solution and glycerin as an anti-freeze and stored at -20 degrees centigrade the blood elements especially the red cells would remain usable.

When asked about the anti-hemophilic factor of blood, Dr. Brown stated that it can be separated but that it has a strange but strong affinity for the homologous serum antigen and no way has yet been devised to separate the two. Frozen serum for the use of hemophiliacs was recommended where it could be obtained.

The practical uses of blood as well as the pitfalls were most interesting. The new ideas and a glimpse into the future of blood were even more so.

DEATHS

DR. JOSEPH SUMTER RHAME

Dr. Joseph Sumter Rhame, a retired Charleston physician and surgeon, died March 4, 1956 at his residence. He had been in declining health for some time.

Active in medical and civic affairs, Dr. Rhame was born in Camden, Jan. 1, 1885.

He attended Camden public schools and also studied under a private tutor. He attended the Medical College of the State of South Carolina, graduating in 1908.

Dr. Rhame served his internship at Roper Hospital and had served as chief of staff at that institution.

Dr. Rhame also attended surgical clinics in Europe for almost a year, returning to Charleston in 1910 to begin a practice of medicine and surgery.

He was a member of the surgical faculty of the Medical College, having taught abdominal surgery at the college for a number of years.

He retired from active practice in October, 1954.

He was a member of the American, Southern, Tri-State and the South Carolina Medical Associations. He was a former president of the Medical Society of South Carolina.

Dr. Rhame had many fraternal affiliations, being a charter member of Tau Chapter of Phi Chi, Medical Fraternity, a Mason, a Shriner and an Elk.

He also held membership in the New England Society, Charleston Country Club and for several years was a member of the Rotary Club.

He was a former member of the Board of Commissioners of Roper Hospital, a Fellow of the American College of Surgeons and a member of the Southern Surgical Association.

During World War I, he served as a lieutenant in the Naval Medical Corps and after the war continued as a member of the reserves. He played a major role in the organizing of a Naval Reserve specialist hospital unit and in 1939 was promoted to the rank of commander.

DR. EDWARD WITHERSPOON BARRON

Dr. Edward Witherspoon (Ned) Barron, 79, died March 14 at the Clarendon Memorial Hospital following an illness of a week.

Dr. Barron was born in Manning Feb. 13, 1877. He received his education in the Manning Schools and graduated at the Medical College of South Carolina. He practiced medicine in Salley for two years, then came to Manning where he followed his profession until he entered the U. S. Army in World War I. Following his release he went to Boston where he specialized in pediatrics and upon graduation there went to Columbia where he practiced until his retirement 11 years ago.

DR. E. Z. TRUESDELL

Dr. E. Z. Truesdell, 77, veteran physician and outstanding citizen of Bethune, died at his home on February 14, after an illness of two days.

A native of Kershaw county, he had practiced medicine in his native county for 41 years prior to his retirement in 1951. During much of the time, he was the only physician in a large part of eastern Kershaw county. He was graduated from the Medical College of South Carolina in 1911, and took post graduate work in eye, ear, nose and throat.

He was a member of the Kershaw County, South Carolina and American Medical Associations and a 50-year member of the Lynchwood Masonic Lodge, a Shriner and member of other Masonic bodies.

NEWS

Dr. John K. Webb of Greenville was named president-elect of the Tri-State Medical Association at its annual meeting held in Charlotte in February. Dr. R. L. Crawford of Lancaster, Dr. William A. Johns of Richmond, Va., and Dr. R. R. Ross of Chapel Hill, N. C. were elected to serve as vice-presidents of the association. Dr. R. B. Davis of Greensboro was elected secretary-treasurer. These officers will be installed in 1957.

Dr. Roy B. McKnight of Charlotte was installed as 1956 president at the concluding session.

Dr. Asa Paul Traywick of Cameron was honored by his patients for 50 years of service to his community as doctor of medicine and friend. The presentation of a silver tray and bronze plaque was made on March 4 by representatives of the Young Men's Business Club, who initiated the plan to honor Dr. Traywick.

Dr. C. B. Harrell, Rock Hill physician, brought to a close his 58-year career as a general practitioner when he retired on March 1st.

A native of Webster County, Georgia, he graduated from Atlanta Medical College, now a part of Emory University. He went immediately into service as a medical officer in the Army in the Spanish-American war.

Before coming to Rock Hill in 1929 Dr. Harrell practiced in Colquitt County, Georgia, for 26 years and in Union, S. C. for a short time.

Diagnosis of virus diseases at the State Board of Health's hygenic laboratory is now possible.

Dr. Eleanor Winthrop Townsend, a clinical pathologist and virologist will be in charge of all technical services in the laboratory.

Dr. Townsend comes from the Veterans Administration hospital at Salisbury, N. C., where she was chief of laboratory services.

She graduated from the Medical College at Charleston in 1927 and served on the faculty there from 1931 to 1940.

She was assistant pathology and bacteriology professor at the Emory University Medical School from then until 1950, and has been connected with hospitals in Michigan and Kentucky and has been in the Navy Medical Corps.

Dr. B. J. Workman, Sr., veteran physician and surgeon of Woodruff, has been elected to the rank of "Qualified Fellow in the International College of Surgeons."

Dr. Workman was selected for the honor at a meeting of the Executive Council of the United States Section, February 18.

The degree will be conferred on Dr. Workman at the next annual congress of the organization.

Dr. and Mrs. George Cullen Battle were presented a gift of silver at a drop-in given for them February 10, in recognition of Dr. Battle's 22 years of service at the South Carolina Sanatorium. Dr. Battle retired as a member of the medical staff on Jan. 1, and the gift was presented by his fellow workers.

Dr. and Mrs. Battle plan to move into Columbia and will be at home at 1819 Senate Street.

Dr. William H. Chapman of Whitney celebrated his 75th birthday March 3.

Dr. Chapman has served the Whitney community and surrounding areas for almost 50 years as a physician. He was the county's Doctor of the Year in 1950.

Dr. Samuel B. Nadler, a professor of Medicine at Tulane University addressed the Anderson County Medical Society on the subject of "Fluid and Electrolyte Balance" on February 14 at the Calhoun Hotel.

Hugh Smith, M. D. has announced the association of William W. Pryor, M. D., Diplomate of the American Board of Internal Medicine in the practice of Internal Medicine at 206 East North Street, Greenville, S. C.

ANNOUNCEMENTS

ANNOUNCEMENT OF REGULAR CORPS EXAMINATIONS FOR MEDICAL OFFICERS UNITED STATES PUBLIC HEALTH SERVICE

A competitive examination for appointment of Medical Officers to the Regular Corps of the United States Public Health Service will be held in various places throughout the country on June 12, 13, 14, and 15, 1956.

Appointments provide opportunities for career service in clinical medicine, research, and public health. They will be made in the ranks of Assistant and Senior Assistant, equivalent to Navy ranks of Lieutenant (j.g.) and Lieutenant.

Entrance pay for an Assistant Surgeon with dependents is $6,017 per year; for Senior Assistant Surgeon with dependents, $6,918. Qualified officers are promoted at regular intervals.

Application forms may be obtained from the Chief, Division of Personnel, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C. Completed application forms must be received in the Division of Personnel *no later than April 30, 1956.*

The Seventh Nalle Clinic Foundation Lectures will be presented at the Veterans Recreation Center, Charlotte, North Carolina, on Friday, April 20, 1956. At 5:00 P. M. Dr. W. E. Kittredge will deliver an address on the topic, "The Significance of Congenital Anomalies of the Genito-Urinary Tract in Children." Dr. Kittredge is Associate Professor of Urology at Tulane University and a member of the Department of Urology of the Ochsner Clinic in New Orleans, Louisiana.

At 8:00 P. M. on the same evening Dr. R. Gordon Douglas will deliver the Seventh Brodie C. Nalle Lecture. His subject will be, "Premature Separation of the Placenta." Dr. Douglas is Obstetrician and Gynecologist-in-Chief of The New York Hospital and Professor of Obstetrics and Gynecology at Cornell University.

SURGEONS TO HOLD SOUTHEASTERN REGIONAL MEETING

The United States Section of the International College of Surgeons will hold a Southeastern regional meeting in the Read House, Chattanooga, April 30 and May 1.

The program will include the presentation of 17 scientific papers, three panels, dinner and luncheon with speakers, and exhibits.

THE THIRD NATIONAL CANCER CONFERENCE

The American Cancer Society and the National Cancer Institute of the Public Health Service, Department of Health, Education, and Welfare, will jointly sponsor the Third National Cancer Conference in Detroit, Michigan, June 4, 5, and 6. More than a thousand research scientists and clinicians, including many from foreign countries, are expected to attend.

The following short courses will be conducted at The Children's Hospital of Philadelphia in May and June 1956.

1. PEDIATRIC ADVANCES FOR PEDIATRICIANS AND GENERAL PRACTITIONERS. May 28 through June 1, 1956. A Refresher Course conducted by the Staff of the Children's Hospital of Philadelphia, in collaboration with the Department of Pediatrics of the University of Pennsylvania and the Camden Municipal Hospital. Tuition—$100.00.
2. PRACTICAL PEDIATRIC HEMATOLOGY. June 4, 5 and 6. Conducted by Dr. Irving J. Wolman and other members of the Hematology Department of the Children's Hospital, under the auspices of the Graduate School of Medicine, University of Pennsylvania. Tuition—$60.00.
3. BLOOD GROUP INCOMPATIBILITIES AND ERYTHROBLASTOSIS FETALIS. June 7 and 8. Conducted by Dr. Thomas R. Boggs, Jr. of the Philadelphia Serum Exchange of the Children's Hospital of Philadelphia, under the auspices of the Graduate School of Medicine, University of Pennsylvania. Tuition—$50.00.

For information write to Irving J. Wolman, M. D., Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46.

SCISSORISMS

THE MAYO CLINIC

Poem of a gratified patient

Well, I've been through the Mayo Clinic
I've seen what there was to see
I'm homeward bound on the Red Bird
And it's quite all right with me.

I've stood in line at the window
I've sat with the waiting throng
And a man from Maine has explained about
His spleen which it seems was wrong.

Strangers have spoken of tumors
Of bowels that wouldn't work
Of livers and lights and bladders
And knees that refused to jerk.

And a woman from Oklahoma
Revealed some things so broad
That I certainly hope they are only known
To her, and me, and God.

I've had both sizes of bottles
I've saved with a miser's zest
I've toted them proudly around with me
And compared them with the best.

I've draped myself in a linen sheet
I've donned my clothes and then
I've draped myself in a little cape
And donned my clothes again.

I've never changed my clothes so much
At least not to the skin
Since the days my mother undressed me
With a single safety pin.

They've punctured, and probed, and prodded
They have diagnosed my heart
They couldn't know more about me
If they'd taken me apart.

I've laid in bed in St. Mary's
Where they termed me an interesting case
And they've stood around and discussed me
As though I were not in the place.

I've fought with the dietician
For the grub had no salt worth the name
And they fed me on spinach and carrots
And my friend with the gout got the same.

A nurse stayed with me each hour
For five or six nights, or more
Which I'm here to assert is going some
For a man of fifty-four.

A woman physician examined me
The result may be inferred
It may have been *grand* for the record
But the blood pressure—Oh my word!

I furnished unaccountable pressure
I furnished a beautiful chart
And we all knew as much at the finish
As all of us knew at the start.

Yes, I've been through the Mayo Clinic
I'm ready to go and get packed
I'm homeward bound on the Red Bird
Thank God—I'm still intact.

J. W. H.
From the *JAMA*